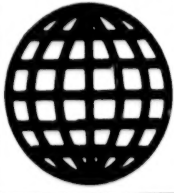


JPRS-TND-93-022

12 July 1993



**FOREIGN
BROADCAST
INFORMATION
SERVICE**

JPRS Report

Proliferation Issues

PROLIFERATION ISSUES

JPRS-TND-93-022

CONTENTS

12 July 1993

[This report contains foreign media information on issues related to worldwide proliferation and transfer activities in nuclear, chemical, and biological weapons, including delivery systems and the transfer of weapons-relevant technologies.]

AFRICA

SOUTH AFRICA

- Armcor Official on Commercialization of Nuclear Facilities [SAPA, 9 Jul 93] 1

CHINA

- Ministry Spokesman Reiterates Stand on Nuclear Testing [XINHUA, 5 Jul 93] 2

EAST ASIA

AUSTRALIA

- U.S. Decision To Extend Nuclear Test Ban Welcomed [HONG KONG AFP, 4 Jul 93] 3

NORTH KOREA

- Pyongyang Denies Contact With Japan on Missile Issue [Tokyo KYODO, 3 Jul 93] 3
ROK Official Says Nodong-1's Were Test-Fired in May [Seoul Radio, 8 Jul 93] 3

SOUTH KOREA

- Nuclear Testing of Equal Concern as DPRK Nuclear Capability
[THE KOREA TIMES, 6 Jul 93] 4
Notice to Readers 4

EAST EUROPE

CROATIA

- Muslims Allegedly Have Chemical Weapons
[Reuf Basegic, Domagoj Draskovic; VJESNIK, 27 Jun 93] 5

ROMANIA

- Nuclear Nonproliferation Policy Discussed With IAEA Official [ROMPRES, 6 Jul 93] 6

LATIN AMERICA

ARGENTINA

- Government 'Gave In' to U.S. on Condor-2 [CLARIN, 2 Jul 93] 7

NEAR EAST/SOUTH ASIA

INDIA

- U.S. Nonproliferation Report Reviewed 8
Content Presented [C. Raja Mohan; THE HINDU, 8 May 93] 8
Analyst's Comment [K.K. Katyal; THE HINDU, 9 May 93] 9
Russian Cryogenic Engine Deal Still Planned [Delhi Radio, 7 Jul 93] 10
Arrangements for Tarapur After French Pact Expires [THE HINDU, 29 Apr 93] 10
High Grade Uranium To Be Mined in Meghalaya [THE TIMES OF INDIA, 5 May 93] 11
Capability of Exporting Critical Components Noted [THE TIMES OF INDIA, 27 Apr 93] 11
Nuclear Reactor Components Developed, Exports Planned 12
Plans Discussed [DECCAN CHRONICLE, 27 Apr 93] 12
Beryl To Be Exported [PATRIOT, 28 Apr 93] 13

IRAN

- Cooperation Protocol Signed With PRC [IRNA, 6 Jul 93] 14

PAKISTAN

- Non-Proliferation Talks With U.S., India Advocated [DAWN, 16 May 93] 15
U.S. Anti-Proliferation Policy Said Based Only on U.S. Interests
[EAS Bokhari; THE PAKISTAN TIMES, 19 May 93] 16
Indian Expert on Pakistan Missile Development
[N. Suresh; THE TIMES OF INDIA, 20 May 93] 16

COMMONWEALTH OF INDEPENDENT STATES

RUSSIA

- Yeltsin Responds to Nuclear Test Moratorium Message [ITAR-TASS, 3 Jul 93] 18
Case for Treaty on Banning, Nonresumption of N-Tests Argued
[Aleksandr Sychev; IZVESTIYA, 2 Jul 93] 18
Ukraine's Pro-Nuclear Moves Could Prompt 'A New Arms Race'
[Aleksandr Sychev; IZVESTIYA, 7 Jul 93] 19
Scientist Disputes Worth of Plasma Weapons
[Aleksy Kuzmin; NEZAVISIMAYA GAZETA, 8 Jul 93] 19
Government Stresses High Accuracy Weapons [Moscow Radio, 6 Jul 93] 21
Unpaid Wages Threaten Projects at Nuclear Research Center 22
Low Wages Not Paid on Time [Sergey Vosyanov; Moscow TV, 4 Jul 93] 22
Center Ready for Strike Action [Yevgeniy Tkachenko; ITAR-TASS, 6 Jul 93] 22
Director on Firm's Red Mercury Connection [ARGUMENTY I FAKTY, Jun 93] 22
Red Mercury Seen as a 'Fiction Used in Money Laundering Scam'
[Aleksandr Gurov interview; PRAVDA, 1 Jul 93] 23

UKRAINE

- Supreme Soviet Official on Arms Trade Control
[V. V. Durdynets; GOLOS UKRAINY, 10 Jun 93] 23

WEST EUROPE

REGIONAL AFFAIRS

- EC-Sponsored Nuclear Fusion Project Announced
[Eschborn NACHRICHTEN FUER AUSSENHANDEL, 1 Jun 93] 28

AUSTRIA

- Officials Seize Radioactive Material 28
Arrest Three Smugglers [W. Theuretsbacher; KURIER, 6 Jul 93] 28
'Nuclear Smugglers' Released [W. Theuretsbacher; KURIER, 7 Jul 93] 28

FRANCE

- Officials To Explain Arms Policy to China [AFP, 8 Jul 93] 28
Defense Ministry Brochure Discusses Hades Nuclear Weapons System
[LE MONDE, 24 Jun 93] 29
Dismantling of Obsolete Nuclear Weapons Temporarily Stopped [AFP, 8 Jul 93] 29
Moratorium on Nuclear Testing Extended [Paris Radio, 4 Jul 93] 29

SWITZERLAND

- Official Denies Report on Nuclear Materials to Iran [Bern Radio, 26 Jun 93] 29

TURKEY

- Foreign Ministry Welcomes U.S. Decision on Nuclear Tests [Ankara TV, 7 Jul 93] 30

UNITED KINGDOM

- Defense Secretary Concerned Over Extended U.S. Nuclear Test Ban
[Chris Moncrieff; PRESS ASSOCIATION, 3 Jul 93] 30

SOUTH AFRICA

Armcor Official on Commercialization of Nuclear Facilities

MB0907192593 Johannesburg SAPA in English
1749 GMT 09 Jul 93

[Embargoed by SAPA until 1000 GMT 10 July]

[Text] Pretoria July 10 SAPA—The commercialisation drive and the effort to establish a commercialisation culture at former nuclear weapons facilities in South Africa was well advanced. Armcor's [Armaments Corporation of South Africa] planning division head Dr Andre Buys said in Hong Kong on Saturday. His speech was forwarded to SAPA in Pretoria.

Addressing the 1993 Hong Kong international conference to promote conversion from military to civilian industry, Dr Buys said South Africa was the only country that had ever totally dismantled a nuclear weapons capability. Since then it had attempted to commercialise former nuclear weapons facilities.

"Generally, it can be said that the supply of high technology products of high quality has come naturally to the newly commercialised organisations launched, as it has been, from a platform of advanced technology and sophisticated large production facilities."

Dr Buys said that the conversion strategies applied to South Africa's ex-nuclear weapons technologies were

similar to those applied by other countries for the conversion of their conventional defence industries. "Not enough time has elapsed for us to tell whether the conversion will be successful over the long term, and since no one else has ever dismantled a nuclear weapons industry, we cannot look anywhere for advice."

President F W de Klerk announced on March 24 this year that the country had destroyed its nuclear weapons before acceding to the nuclear non-proliferation treaty in July 1991. The nuclear and military facilities used for the development and production of nuclear warheads have since been converted to commercial applications.

Dr Buys said the enrichment technology developed by the atomic energy corporation as well as the nuclear materials that were produced, constituted an important asset for the country. "They will contribute significantly to the ultimate success of the atomic energy corporation's peaceful commercialisation programme."

The nuclear material used for the devices had been recovered and would be used to enlarge the production of radioactive isotopes for medical and industrial purposes.

Armcor's facilities had been decontaminated and converted to non-nuclear commercial purposes.

High explosives technology developed for nuclear weapons application was being used for the production of clad metal sheets and explosively formed metal parts, added Dr Buys.

Ministry Spokesman Reiterates Stand on Nuclear Testing

*OW0507094793 Beijing XINHUA in English
0935 GMT 5 Jul 93*

[Text] Beijing, July 5 (XINHUA)—A spokesman for the Chinese Foreign Ministry today reiterated China's stand on nuclear testing in response to the United States extension of nuclear test ban.

U.S. President Bill Clinton announced Saturday [3 July] the U.S. would extend the time limit of halting nuclear bomb tests to October 1, 1994.

The spokesman was asked how China will react to the announcement to which major nuclear states have made reactions.

The spokesman said: "China has always stood for a complete prohibition of nuclear tests within the framework of complete prohibition and thorough destruction of nuclear weapons."

"China has all along exercised much restraint in nuclear testing, and the number of its nuclear tests has been the smallest among the five nuclear states," the spokesman added.

The five nuclear states are Britain, China, France, Russia and the United States.

AUSTRALIA

U.S. Decision To Extend Nuclear Test Ban Welcomed

BK0407103893 Hong Kong AFP in English
0859 GMT 4 Jul 93

[Text] Canberra, July 4 (AFP)—Australian Foreign Minister Gareth Evans on Sunday welcomed Washington's decision to extend its nuclear testing moratorium to at least September next year.

The call by U.S. President Bill Clinton to other nuclear powers to follow the United States' example created the strongest possible position to negotiate a comprehensive test ban treaty, Evans said in a statement.

"The U.S. decision not to resume testing, even though that decision is conditional and time limited, is both gratifying and timely," Senator Evans said.

"It will be of great benefit in creating a positive atmosphere in the lead up to the Non-Proliferation Treaty Review and Extension Conference in 1995 and provides a firm basis for further progress on both nuclear non-proliferation and nuclear disarmament in the 1990s."

The test ban treaty would discourage other states from developing their own nuclear arsenals.

Evans said Australia had been one of the countries working most actively towards a permanent end to all nuclear testing.

He had written to U.S. Secretary of State Warren Christopher on June 9 urging Washington to maintain its testing moratorium.

"It is now of vital importance that all nuclear weapons states follow the lead of the United States in adopting or extending moratoriums on their testing programs," he said.

NORTH KOREA

Pyongyang Denies Contact With Japan on Missile Issue

OW0307133293 Tokyo KYODO in English 1301 GMT
3 Jul 93

[Text] Beijing, July 3 KYODO—The North Korean ambassador to China on Saturday [3 July] flatly denied remarks by the Japanese foreign minister that envoys from the two countries met in Beijing over North Korea's development of missiles.

Chu Chang-chun told reporters that Tokyo asked Pyongyang for a meeting on the issue but North Korea refused the request.

Japanese Foreign Minister Kabuo Muro said in talks with his South Korean counterpart Han Sung-chu in Seoul on Tuesday that Tokyo conveyed its concerns about the development of the Rodong 1 missile in North Korea through Japan-North Korean talks in Beijing, officials said.

Chu, however, indicated that the reclusive communist country test fired a Rodong 1 missile, saying that even if it were true, it is normal because any country conducts various military exercises out of necessity.

Japanese Defense Agency officials said in early June that North Korea tested the new intermediate-range missile with a range of 1,000 kilometers, capable of reaching western Japan.

Touching upon the U.S.-North Korea talks over Pyongyang's suspected development of nuclear weapons set for July 14 in Geneva, Chu said, "We want the normalization of bilateral relations with the U.S. We would like to make the utmost effort to ensure the success of the talks."

The ambassador, however, reiterated Pyongyang's original stance on the inspection of its nuclear facilities demanded by the International Atomic Energy Agency (IAEA), saying, "It is very unfair."

North Korea announced on March 12 that it would pull out of the Nuclear Non-proliferation Treaty (NPT), defying IAEA requests to open two of its suspected nuclear facilities at Yongbyon, some 95 kilometers north of Pyongyang for special inspection. North Korea insisted that it is a conventional military facility and thus the IAEA has no right to demand its inspection.

But on June 11, Pyongyang suspended its decision to withdraw from the pact to control the spread of nuclear technology after four rounds of talks with the U.S.

ROK Official Says Nodong-1's Were Test-Fired in May

SK0807093693 Seoul KBS-1 Radio Network in Korean
0910 GMT 8 Jul 93

[Text] It seems that North Korea will deploy Nodong-1's, the long-range missiles of 1,000 km range, for actual combat use by 1995 or so. A high-ranking official of the National Unification Board today said that the government ascertained that North Korea test-fired four Nodong-1's of 1,000 km range from a missile firing range in Hwatae County, North Hamgyong Province this 25 May. Two of the missiles hit targets in the East Sea 500 km and 1,000 km away.

SOUTH KOREA

Nuclear Testing of Equal Concern as DPRK Nuclear Capability

SK0607054693 Seoul THE KOREA TIMES in English
6 Jul 93 p 6

[Editorial: "Nuclear Test Ban"]

[Text] It is reassuring to learn that the United States and Russia have renewed their agreement to shelve nuclear experiments.

Russian President Boris Yeltsin stated that Russia will not become the first country to resume nuclear tests. In response, U.S. President Bill Clinton reportedly made up his mind to start negotiations with other nuclear powers to find ways for all nations to ban nuclear tests for good.

We believe that it is fundamentally unreasonable for nuclear powers to continue nuclear tests while they try to keep other nations from developing nuclear weapons.

In other words, the nuclear non-proliferation effort on a global basis can be convincing if and only if the world is confident that the nuclear arsenals of the five nuclear powers—the United States, Russia, the United Kingdom, France and China—are being reduced.

Countries which are attempting to develop their own nuclear arms or refusing to join the Nuclear Non-Proliferation Treaty (NPT) claim that the treaty is basically neither impartial nor fair since it allows the domination of the five nuclear powers.

To rectify the defeat of the unequal NPT, the nuclear powers should have carried out nuclear reduction plans more sincerely as called for by the treaty's provisions.

Instead, to our great regret, they continued to engage in a fierce nuclear arms buildup race until only some years ago.

To attest to this, the nuclear warheads held by the two nuclear superpowers—the United States and Russia (formerly the Soviet Union)—continued to increase to more than 20,000 in 1990 from some 8,000 in 1970 when the NPT was put into effect. Thus the inequality of the treaty only widened the gap in armament among the nuclear powers and nonnuclear nations.

Also to be noted in the nuclear non-proliferation bid is the insufficiency of the 1963 Nuclear Test Ban Treaty which fell short of prohibiting underground nuclear testing.

The five nuclear powers are called upon to seek a total and lasting ban of nuclear testing so as to muster wide support from other members of the NPT. They are urged to start negotiations immediately to this end.

We are as much concerned about any nuclear testing by the nuclear powers as North Korea's wild moves to develop nuclear arms.

Notice to Readers

[Editorial Report] An FBIS survey of media reporting on the South Korean launching of its first indigenous rocket is currently available to consumers of the Proliferation Issues Report. Entitled 'South Korea: First Indigenous Rocket Launched', this survey provides information beyond the translations published in this report.

A second media survey which discusses the planned September launch of South Korea's first indigenous satellite is also available. The survey is entitled 'South Korea: Indigenous Earth Satellite Moves Toward Launch.'

To order a copy of either of these media surveys, call the Proliferation Issues Report editor on (703) 733-6468.

CROATIA

Muslims Allegedly Have Chemical Weapons

AU0607084293 Zagreb VJESNIK in Serbo-Croatian
27 Jun 93 p 10, 11

[Reuf Basegic and Domagoj Draskovic report: "Jihad Threatens With Chemical Bombs"]

[Text] At the beginning of March 1993 the military intelligence services of France and the United States informed their headquarters that the war in Bosnia-Herzegovina could continue with the use of very dangerous and lethal chemical weapons. According to these warnings, the Muslim side would be willing to use this type of arms as a final resort to turn the fighting to its advantage. There are no reports as to whether the headquarters of the French and the American Armies informed their governments of these findings, but a similar warning arrived in the General Staff of the Yugoslav People's Army in Belgrade [JNA] from Greece in mid-April.

Namely, quoting the findings of its intelligence agents, the Greek headquarters informed JNA of the readiness of the Bosnia-Herzegovina Army to use chemical weapons in the battles in eastern Bosnia. According to this warning, these weapons comprise aircraft bombs filled with nerve gases. The Greek intelligence agents in their warning to Belgrade claimed that the purchase of this type of weapons was underway at that time and that the middlemen in this deal came from the ranks of the National Liberation Front for Palestine, one of the PLO factions.

A Mere Threat or...

The stories about the Bosnia-Herzegovina Muslims purchasing chemical weapons even reached NATO Headquarters and the military experts in this organization gave their full attention to them. Since there was no concrete information, while the intelligence agents searched in vain for details, and their opinion was that this was nevertheless a case of mere threat issued by the psychological warfare service of the General Staff of the Bosnia-Herzegovina Army. However, in the second half of June, Alija Izetbegovic, president of the Bosnia-Herzegovina Presidency, during his visit to Ankara stated in an interview for the Turkish news agency ANATOLIA how he "no longer rules out the use of chemical weapons as the last resort in the struggle against the Serbs...."

With the help of our connections in the General Staff of the Bosnia-Herzegovina Army and in the Middle East, VJESNIK journalists tried to find out how feasible such threats are. According to our findings, the Bosnia-Herzegovina Army currently possesses 23 aircraft bombs filled with nerve gases and other chemical agents. These are weapons of a slightly older manufacture but nonetheless lethal and dangerous. Namely, the use of chemical weapons, that is, their effect, cannot be kept under

control and it is, thus, not impossible that use of such bombs could have catastrophic consequences on the entire territory of former Yugoslavia.

According to the findings of VJESNIK journalists, the main advocator of the use of chemical weapons is Imam Hasan Cengic, whom Western intelligence sources claim is the actual defense minister in the Bosnia-Herzegovina government. This is a person whom Alija Izetbegovic has trusted personally since the times they spent in prison together. Hasan Cengic has traveled very often on the Sarajevo-Zagreb-Middle East route so far and has good connections with some fundamentalist and radical circles in Iraq, Syria, and Iran.

With the help of his connections in the Middle East, Cengic contacted the representatives of the National Liberation Front for Palestine and Dr. George Habash, one of the radical PLO leaders. It was agreed during the last meeting that Habash would deliver some 20 aircraft bombs filled with chemical substances to the Bosnia-Herzegovina Muslims. These bombs were stolen from the Lebanese Army ammunition dump near the town of Zgaort [place name as published] a few years ago. Since the Palestinians do not have their own air force, the bombs were stored all this time in the mountains of Lebanon, above Sidon, where Habash's followers have several of their bases.

Chain of Middlemen

It is definite that a journalist who was staying in the Middle East between 1 and 7 April also took part in this job. According to already stipulated agreement, the bombs were transferred from Lebanon to Syria and then to Iraq. The passage of the cargo via Syrian territory was organized by Rifat Asad, brother of Syrian President Hafiz al-Asad.

The cargo with lethal arms was then stored in the Iraqi Army base some 150 km northeast of Damascus. By the way, it is worth mentioning as a curiosity that the JNA experts designed this base for the needs of the Iraqi Army in 1979, and that the electronic security equipment for it was provided by the Nis Electronic Industry and Mihajlo Pupin Institute in Belgrade.

Further talks about how bombs would be brought to Bosnia-Herzegovina were held in Ankara with representatives of the Igasso humanitarian organization. While there is no exact proof, there is considerable suspicion that an Iranian diplomat who was recently killed in the fighting and for whose death Tehran blamed the Croatian Defense Council [HVO] was in Bosnia precisely because of the delivery of the chemical weapons.

According to the final agreement, the bombs were loaded on the trucks with humanitarian aid and during their passage through Turkey furnished with the Red Crescent insignia. General Rifat Asad organized the arrival of five aircraft specialists for the use of chemical weapons in Bosnia-Herzegovina together with the dispatch of the chemical weapons. According to what the VJESNIK

team has discovered, they were today accommodated at the Dubrave air base near Tuzla. Namely, at this airport they secretly fitted two aircraft to carry the lethal load of chemical weapons at a given moment, although it is not clear where and against whom these weapons would be used. It is worth mentioning that we are talking about weapons whose use is banned by international conventions and which were last used in the Iraqi-Iranian war on both sides.

Advocates of Chemical Weapons

So far in the war in Bosnia-Herzegovina it can be seen that the major international arms' manufactures have not used this territory as a peculiar sort of testing ground for new types of weapons. There are several reasons for this. Practice has shown that it is the most sophisticated military equipment and arms that the arms' manufacturers wish to test in hostilities, while they are less interested in conventional infantry and artillery weapons. It is precisely the latter type of weapons that is being used in Bosnia-Herzegovina. Apart from a few modified multiple rocket launchers, no little known and tested weapon is being used in Bosnia-Herzegovina.

It is obvious, however, that as the war develops it could be that some old-fashioned but very dangerous weapons are used, such as aircraft bombs containing chemical agents.

We have learned unofficially that some Western intelligence sources have pointed out the danger of chemical weapons being used in Croatia together with a recommendation that HVO military institutions in Bosnia-Herzegovina be informed of it. Nobody in Croatia wanted to say anything official about Izetbegovic's threat to use chemical weapons if the war continues. We were told in unofficial contacts, however, that it is judged that such a threat is not without foundation. Sources in the Bosnia-Herzegovina Army told us that the chief advocates of the use of chemical weapons are Sefer Halilovic, recently replaced as the commander of the General Staff of the Bosnia-Herzegovina Army, and Mostar Corps Commander Arif Pasalic. Beside them, within the political structure of the Bosnia-Herzegovina Muslims such a form of combat is also favored by Enver Mahmutcehajic and Hamdija Dervisevic, our sources claim.

The current almost total international isolation of Alija Izetbegovic could probably be associated with the hints about the possible use of chemical weapons in the Bosnia-Herzegovina war. Namely, it seems that the Western countries have begun to realize that Izetbegovic and his rigid and unyielding policy, which wants to solve the crisis exclusively by war, are unsuitable for more serious political talks.

It is also indicative that the area of the Dubrave air base near Tuzla has been closed off for weeks and not even the officers of the Bosnia-Herzegovina Army have access without a special permit. Will the chemical apocalypse follow all the horrors that have taken place on the Bosnia-Herzegovina battlefields? For the time being only Izetbegovic and his most faithful followers know the answer.

ROMANIA

Nuclear Nonproliferation Policy Discussed With IAEA Official

AU0607162293 Bucharest ROMPRES in English
1038 GMT 6 Jul 93

[Text] Bucharest, ROMPRES, 6/7/1993—Constantin Ene, a state secretary with the Ministry of Foreign Affairs, and Sueo Machi [name as received], deputy general director and head of the IAEA Research and Isotopes Department, analyzed on Monday, 5 July, in Bucharest, the evolution of cooperation ties between Romania and the International Atomic Energy Agency. The Romanian diplomat pointed out the dynamic evolution of these ties and expressed Romania's firm policy on the non-proliferation of nuclear weapons as well as of other means of mass destruction, and stressed the substantial role played by the IAEA in the application of the guarantee and control system, as well as the Romanian Government's full support for the activity carried out by the agency in fields of interest vital for the security and stability at global and regional level.

In his turn, the guest expressed the openness of his organization to further develop ties with Romania and diversify forms of cooperation in personnel training, in granting of assistance and for a peaceful application of nuclear power at large.

ARGENTINA

Government 'Gave In' to U.S. on Condor-2

PY0307140493 Buenos Aires CLARIN in Spanish
2 Jul 93 p 16

[Text] Cordoba—Cordoba Governor Eduardo Angeloz today complained "for ease with which the Argentine Government gave in" to U.S. pressure in the case of the deactivated Condor-2 missile project.

"We could have agreed to some kind of solution regarding the recycling" of the Falda del Carmen plant where the Air Force developed the project, "but it is regrettable for the country that the announcement was made by the U.S. ambassador," Angeloz said.

He was referring to the announcement made a few days ago by U.S. Ambassador Terence Todman, who said that U.S. experts would come to Argentina to study how to convert the plant for peaceful uses, despite the many rumors that the United States intended to directly destroy the Falda del Carmen plant.

"To begin with, I would not have given in so easily to the U.S. pressures, as the national government has done, given that it was technological progress involving the creativity and inventiveness of Argentine experts," the governor said.

Angeloz also spoke about President Carlos Menem's visit to Washington.

"I do not doubt that from the political point of view it has been very favorable. The support obtained from the president of the most important country of the world is very valuable political support, which must be acknowledged," Angeloz said.

However, he added, "in other aspects I think that we knew beforehand the negative results regarding the subsidies and the U.S. demands for the medicine patents bill."

"I believe that the patents bill will not be approved and the subsidies will not cease," Angeloz said.

INDIA

U.S. Nonproliferation Report Reviewed

Content Presented

93WP0187A Madras *THE HINDU in English*
8 May 93 p 9

[Article by C. Raja Mohan: "U.S. Calls for Indo-Pak Nuclear Dialogue"]

[Text] Washington, May 7

Stressing the importance of a "direct high-level dialogue" between India and Pakistan on the proliferation issues the U.S. President, Mr. Clinton, has called on both the countries "to reach agreement on and implement near-term concrete tension-reduction measures, including additional nuclear and non-nuclear confidence and security-building measures (CSBMs)."

In the first-ever public report on non-proliferation in South Asia by the American Government, the Clinton Administration has now made formal some nuanced shifts in its recent approach towards the nuclear issues in the subcontinent. The focus on encouraging direct Indo-Pak nuclear negotiations appears to have taken precedence over the NPT or the Five Power Conference on non-proliferation in South Asia. Washington, however, continues to see the utility of a wider multilateral process on non-proliferation in the subcontinent; but the priority for now is bilateral negotiation between India and Pakistan, with the United States playing the role of a catalyst.

Thrust to prevent war: The shift in the American approach is not limited to the framework of negotiation but encompasses substantive issues as well. The thrust of the new approach is to prevent a war between India and Pakistan that could escalate to the nuclear level. Without forswearing the long-term goal of eliminating nuclear weapons in the region, Washington is now proposing the immediate capping of these capabilities. Thus, the institution of confidence and security-building measures comes into focus.

Mr. Clinton's package of nuclear CSBMs for South Asia includes: a unilateral or bilateral regional cut-off of fissile material production; a regional nuclear test ban, bringing new and existing nuclear facilities under safeguards; early ratification and implementation of the Chemical Weapons Convention; formal commitments to adhere to the various export control mechanisms relating to mass destruction weapons; tightening administration of export controls; and bilateral security assurances.

Two new proposals: Many of these ideas had surfaced in the earlier Indo-U.S. discussions on non-proliferation, but the Clinton Administration is now making them public. There are two new proposals. One is for an "an international seminar—probably under IAEA auspices on nuclear safety, compliance and verification of nuclear

agreements." The other is to expand the current Indo-Pak agreement not to attack each other's nuclear facilities to proscribe attacks on population centres.

In relation to non-nuclear confidence-building measures, the Clinton Administration is proposing the establishment of regional risk reduction centres, adoption of the provisions of the Open Skies Treaty, creation of a hotline between the chiefs of air operations in the two air forces, invitation of observers at military exercises, and regular military exchanges.

The Clinton Administration believes that the adoption of these CSBMs "could contribute to an improved nonproliferation climate in South Asia and enhance regional security, while reducing tensions and improving Indo-Pakistani relations." It refers to the American efforts at public diplomacy in the region to popularise the notions of arms control. "Public diplomacy will continue to expose the Indian and Pakistani publics to international trends in arms control thinking and to consider how they can be applied to the South Asian region."

Indian position: New Delhi may have little objection in principle to expanding non-nuclear CSBMs. But its opposition to a regional test ban and an Indo-Pak cut-off in the production of fissile material are well-known. India has been for global agreements on these issues. New Delhi has also argued that an Indo-Pak agreement on ending production of fissile material would be unverifiable given the longstanding Sino-Pak cooperation in the development of nuclear weapons.

The report does note, accurately, India's globalist disarmament positions, its opposition to discrimination, as well as its security concerns in relation to China. It in fact reinforces the Indian apprehensions by stating that despite its adherence to NPT and the MTCR, "concerns remain about whether China has terminated its links to Pakistan's nuclear weapon programme and about its missile export policies." (The Administration has submitted a separate classified report on the nuclear and missile programmes of China, Pakistan and India.)

It is obvious that Washington is no longer brushing aside India's concerns in relation to China. But clearly, the Clinton Administration is not yet prepared to factor China into a nonproliferation regime in the subcontinent. It also records India's apprehensions on the ongoing nuclear and missile proliferation in Central Asia and the Middle East.

The Clinton Administration's position on export controls does not appear to be a productive one. While demanding that India support the existing export control mechanism in relation to nuclear, chemical and missile technologies, Washington insists on discouraging the export of these technologies "from other countries to India and Pakistan." Washington appears to have missed an important opportunity to open the door for an Indo-U.S. dialogue on export controls and enhancing India's access to high technology.

Kashmir issue: Even as it focuses on a bilateral dialogue between India and Pakistan on the nuclear issues, the Clinton Administration calls for an "Indo-Pak. dialogue on Kashmir, focusing initially on achievable near-term steps such as demilitarisation of the Siachen Glacier." This clearly is a sop to the argument in Islamabad that too much focus on confidence-building measures would help India by shifting attention away from the Kashmir issue. The report notes that "in the twenty-one years since signing the Shimla Accords, neither India nor Pakistan has taken the steps required to fulfill all terms of that agreement."

The attempt to be even-handed between India and Pakistan is stretched to the limit when the Report calls for "action by both states to cease support for militants who commit terrorist acts in the other."

Notwithstanding some of these limitations, the report makes a genuine effort at understanding the obstacles to regional arms control in the subcontinent. For those non-proliferation crusaders in Washington, the Clinton Administration has a few words of caution: "dealing successfully with nuclear and missile proliferation in South Asia will require that the U.S. and others take into account both Indian and Pakistani domestic political concerns and regional security threat perceptions, including those extending beyond the two countries themselves. It cannot be addressed simply as a non-proliferation issue pursued on the basis of external pressure by the U.S. alone."

It is this underlying realism that generates the hope that the American non-proliferation policy could continue to evolve in a positive direction. It has come a long way since November 1991, when a senior Bush Administration official, Mr. Reginald Bartholomew, came to New Delhi, proposing to convene the Five Power Conference in a few months. Having weathered the storm of NPT and the Five Power Conference, New Delhi must now set forth its own positive arms control agenda making explicit the measures it is prepared to undertake at the global extended regional and bilateral level.

Analyst's Comment

93WP0187B Madras *THE HINDU* in English
12 May 93 p.8

[Article by K.K. Katyal: "U.S. Even-Handedness on Nuclear Issue"]

[Text] New Delhi, May 8. An eminent persons group has been engaged for the last two months in the examination of various policy options available to India in the nuclear field so as to enable the Government to choose the one most suited in the present-day security and political environment. Because of the sensitive nature of the job entrusted to it, the group, comprising serving and retired senior officials of the Atomic Energy Commission and other official and non-official experts, has been on the job quietly, taking care to avoid publicity. Whether India should retain the nuclear option and how to respond to

growing pressures by the non-proliferation lobby in the U.S. and other industrialised countries are among the issues being addressed by it.

The Government set up the group in anticipation of a formal indication of the Clinton Administration's thinking on nuclear non-proliferation, which, it was clear, was one of the main concerns of its leading figures. That they attached great importance to this subject was evident not only from the campaign rhetoric but also from the initial pointers from Washington after the change.

Clinton document: The report, just given by the President, Mr. Bill Clinton, on non-proliferation in South Asia, to congress is certain to be taken into account by the group, expected to complete its work by the month-end. The government, thus, will have the benefit of the considered views of official and non-official experts in preparing its response to the latest thinking in Washington.

Some of the formulations in the Clinton document are not to India's liking, but there is a lot that vindicates New Delhi's stand. External Affairs Ministry officials could have the satisfaction that their labour in the last six months or so had not been completely in vain.

China factor: Particularly noteworthy is the recognition of the China factor in the context of India's security threat perceptions. Here is one significant point—"dealing successfully with nuclear and missile proliferation in South Asia will require that the U.S. and others take into account both India and Pakistani domestic political concerns and regional security perceptions including those extending beyond the two countries themselves."

Another formulation: "India has reciprocal suspicions about Pakistan and is concerned about reports of Pakistan's support for separatist movements in India. Added to this is India's caution over the intentions of China. India's latent security concerns about China are a major obstacle to gaining New Delhi's support for any regional discussion in view of India's belief that Chinese nuclear and missile programmes also must be taken into consideration. China has, to the contrary, held firm to its position that it has no aggressive intentions towards its neighbours and says that its nuclear programme is modest and not a legitimate subject for discussion until the inventories of the U.S. and Russia come down to the same magnitude."

The point is elaborated thus: "India has long been concerned about China's military relationship with Islamabad and about reports of past assistance to Pakistan's nuclear weapons and missile programmes, and consequently believes that China therefore does not approach Indo-Pakistani regional security and proliferation issues as a disinterested party. India has also expressed concern about the current and potential existence of nuclear weapons and ballistic missile programmes elsewhere in the extended region, in particular

former Soviet weapons in Central Asia, as well as WMD-related efforts by other states in western Asia, and the fact that the proposed five-party discussions do not include these countries."

How Pakistan's nuclear ambitions had added to India's earlier concern over Chinese capabilities is explained at length: "While India's weapons of mass destruction (WMD) and missile programmes initially were driven by security concerns about China, Pakistan's WMD-related programmes now add to those concerns. Some Indians believe that nuclear and ballistic missile capabilities have deterrent value against China, as well as Pakistan; other Indians see these capabilities also as conferring on India global power status and equality of rights with the nuclear weapons states, especially China."

The report refers to China's assistance in the past to Pakistan's missile programme and possible Chinese cooperation with Pakistani nuclear activities. "Concerns remain about whether China has terminated its links to Pakistan's nuclear weapons programme and about its missile export policies."

To refer to the U.S. recognition of the China factor is not to suggest that India's views have found acceptance on all matters of vital concern to it. Far from it. As a matter of fact, a new U.S. even-handedness between India and Pakistan is discernible in the report.

Russian Cryogenic Engine Deal Still Planned

BK0707034493 Delhi All India Radio Network in English 0245 GMT 7 Jul 93

[Text] The India-Russian deal on the supply of cryogenic rocket engines and transfer of technology is very much on. This was stated by a senior Indian diplomat in Moscow yesterday. He said the ISRO [Indian Space Research Organization], Dr. U.R. Rao, is having talks with representatives of the Russian enterprises involved in the contract. The official said that at none of the several meetings so far was there any indication that Russia wants to scrap the deal. He said the talks are proceeding in a friendly atmosphere. Both sides reviewed the implementation of the contract. Dr. Rao also met the Russian deputy prime minister, Mr. Aleksandr Shokhin, and the foreign economic relations minister, Mr. Sergey Glazyev.

Arrangements for Tarapur After French Pact Expires

93WP0190A Madras THE HINDU in English 29 Apr 93 p 11

[Article: "Steps To Keep Tarapur Reactors Going"]

[Text] New Delhi, April 28. The Department of Atomic Energy is making alternate arrangements to keep the Tarapur nuclear reactors going after the agreement with France for the supply of enriched uranium expires in October.

While India's other indigenous reactors use natural uranium, the Tarapur reactors, which were secured from the United States, require enriched uranium. After the Pokharan explosion, the U.S. stopped supplying enriched uranium for Tarapur. Subsequently, France agreed to provide the enriched uranium needed. But in recent times, France has made it clear that it would not renew the contract unless India signed the Nuclear Non-Proliferation Treaty.

Substitute: India's nuclear scientists are, however, confident that they can keep the Tarapur reactors operational using MOX (mixed oxide) fuel instead of enriched uranium. In MOX, plutonium derived by reprocessing spent fuel from nuclear reactors is mixed with natural uranium to increase the proportion of fissile material.

According to the latest annual report of the Department of Atomic Energy which has been tabled in Parliament, work on MOX fuel assemblies for Boiling Water Reactors (the Tarapur reactors are of this type) was under way at the Advanced Fuel Fabrication Facility at Tarapur. Uranium oxide rods for such reactors were under fabrication and the bulk introduction of plutonium in the production lines would be taken up shortly.

One more plant: Apart from the existing reprocessing facilities at Tarapur and Trombay, the third reprocessing plant at Kalpakkam was at an advanced stage of completion, according to the report. The Kalpakkam reprocessing plant would provide the plutonium needed for the 500 MW Prototype Fast Breeder Reactor now under development. 'One more reprocessing plant of larger throughput is in the planning stage,' according to the annual report. This would create the plutonium base required to sustain the country's Fast Breeder Power Programme.

The first of the indigenous 500 MW Pressurised Heavy Water Reactors is to be established at Tarapur. The Tarapur Atomic Power Project's Units 3 and 4 will have two units of 500 MW each and would cost over Rs 2,400 crores.

Uncertainty: The 220 MW Unit-1 of the Kakrapar Atomic Project went critical in September 1992 and Unit 2 was expected to be commissioned by December this year, according to the annual report. Units 1 and 2 of the Kaiga project were expected to be ready by June 1996 and December 1996 respectively. Units 3 and 4 of the Rajasthan Atomic Power project were expected to go critical in 1996 and 1997.

The uncertainty over the Koodamkulam project in Tamil Nadu appears to be continuing as there is no mention of it in the report or the performance budget of the department. Russia was to provide two 1,000 MW reactors for this project. Although Russia has reportedly not yet formally withdrawn from the project, there is considerable doubt over its continued participation. Subsequently, there have been reports that the DAE might establish indigenous 500 MW pressurised heavy water reactors there.

High Grade Uranium To Be Mined in Meghalaya

93WP0188 Bombay *THE TIMES OF INDIA* in English
5 May 93 p 21

[Text] Hyderabad, May 4 (UNI). The department of atomic energy (DAE) will set up a mine and a mill to produce uranium concentrate at Domiasat in West Khasi Hills of Meghalaya where large reserves of high grade uranium have been discovered recently.

The uranium concentrate will be transported to the nuclear fuel complex (NFC) at Moula Ali near Hyderabad for fuel fabrication for eventual use in the country's nuclear power reactors. The work on the proposed mill and mine will start during the current plan period, according to Mr. K.K. Dwivedy, director of the atomic minerals division (AMD) of the DAE.

A feasibility report of the consultants appointed for the purpose was expected shortly. The proposed mill and mine would be operated by the Uranium Corporation of India, he said.

The finds at Domiasat, are a significant breakthrough in the location of rich sandstone-type uranium deposits. The grade of the ore at Domiasat is better than the existing uranium deposits at Jaduguda in Bihar.

The uranium deposits at Domiasat are estimated at 10,000 tonnes. The reserves so far identified in the country are over 70,000 tonnes, adequate for the establishment of 10,000 MW nuclear power capacity by 2000 AD and sustaining the same for about 30 years.

Mr. Dwivedy said the deposits of uranium in Cuddapah district of Andhra Pradesh were found to be larger than originally estimated but the grade was lower than that of the ore found in Jaduguda.

He said, when the grade was low, the investment requirement for mining and milling would be more. "The lower the grade, higher will be the cost."

The grade of uranium in the country was the lowest among the countries currently mining or producing uranium. After various surveys, it was proved that Domiasat had "workable" deposits.

He said that AMD was putting up small plants in Madhya Pradesh and Bihar for recovering yttrium and other rare earth elements, which are used in superconductors and permanent magnets. Three experimental plants were already working in MP and Bihar.

During the next five years, AMD will give thrust on finding unconformity deposits (deposits which are buried under sedimentary or metamorphic rocks). Such concealed deposits have not been discovered in the country yet. Australia and Canada were the two countries which had discovered such deposits. The country had some potential areas of concealed deposits in Rajasthan, MP and Shillong.

Mr. Dwivedy said AMD would also concentrate on finding uranium, copper and coal deposits in the earth's iron reaches. It was expected that deposits in the region reaches would yield large tonnage besides giving byproducts like gold.

Capability of Exporting Critical Components Noted

93WP0174 Bombay *THE TIMES OF INDIA* in English
27 Apr 93 p 18

[Text] Hyderabad, April 26 (UNI)—India has joined the select band of two countries in the world which have the ability to export the critical components required for nuclear reactors, according to Mr K. Balaramamurthy, chief executive of the Nuclear Fuel Complex (NFC) at Nacharam, near here.

The other two countries which have this capability are the United States of America and France.

Mr. Balaramamurthy said the NFC had the capability and expertise to produce the sophisticated zircaloy tubes (a vital component for reactors), meeting stringent technical specifications right from the raw material stage to the finished product.

NFC's achievement had attracted attention world-wide, and at least half-a-dozen countries had shown interest to acquire the NFC technology for zirconium alloy tubes and components, he added.

The countries which had evinced interest in obtaining the NFC technology were Canada, which had the largest number of nuclear reactors in the world, South Korea, Argentina and Romania.

Mr Balaramamurthy said that this year, the NFC planned to catch the export market besides meeting the requirements of the country's nuclear power programme.

The source mineral for the production of zirconium metal was zircon and (zirconium silicate), available in the beaches of Kerala, Tamil Nadu and Orissa. The flow sheets for the conversion of uranium concentrate to pure uranium oxide pellets and conversion of zircon to zirconium alloy tubing, and assembly of fuel bundles, had been initially developed at the Bhabha Atomic Research Centre.

He said another significant achievement was that NFC had developed an alternative programme to meet the fuel requirement of the Tarapur atomic power station if France stopped the supply of enriched uranium.

The alternative route developed for Tarapur was the mixed oxide fuel and technique for this had already been standardised and could be used at any moment, he added.

NFC supplied all the fuel assemblies and components to the country's seven nuclear reactors.

Mr Sarat Chandra said the NFC would buy all the 300 tonnes of zirconium sponge produced at the Tuticorin plant and if any excess quantity was produced it would be first offered to the NFC.

Mr Balaramamurthy said that in the second phase, a titanium sponge plant would be established in the same area at Tuticorin to produce 1,000 tonnes of titanium sponge per annum.

The plant, being built at a cost of Rs 100 crores, was expected to commence production in 1997. Titanium alloy has application in the production of aircraft, spacecraft and the heat exchange tubes.

Nuclear Reactor Components Developed, Exports Planned

Plans Discussed

93WP0191A Hyderabad DECCAN CHRONICLE
in English 27 Apr 93 p 3

[Article: "India To Export Nuclear Reactor Components"]

[Text] Hyderabad, April 26 (UNI): India has joined the select band of two countries in the world which have the ability to export the critical components required for nuclear reactors, according to Mr K. Balaramamurthy, chief executive of the Nuclear Fuel Complex (NFC) at Nacharam, near here.

The other two countries which have this capability are the United States of America and France.

Mr Balaramamurthy said the NFC had the capability and expertise to produce the sophisticated zircaloy tubes (a vital component for reactors), meeting stringent technical specifications right from the raw material stage to the finished product.

The NFC's achievement had attracted attention worldwide, and at least half-a-dozen countries had shown interest to acquire the NFC technology for zirconium alloy tubes and components. The countries which had evinced interest in obtaining the NFC technology were: Canada, which had the largest number of nuclear reactors in the world, South Korea, Argentina and Romania.

Mr Balaramamurthy said that this year, the NFC planned to catch the export market, besides meeting the requirements of the country's nuclear power programme.

The source mineral for the production of zirconium metal was zircon sand (zirconium silicate), available in the beaches of Kerala, Tamil Nadu and Orissa. The flow sheets for the conversion of uranium concentrate to pure uranium oxide pellets and conversion of zircon to zirconium alloy tubing and assembly of fuel bundles had been initially developed at the Bhabha Atomic Research Centre.

He said another significant achievement was that the NFC had developed an alternative programme to meet

the fuel requirement of the Tarapur Atomic Power Station if France stopped the supply of enriched uranium.

The alternative route developed for Tarapur was the mixed oxide fuel and technique for this had already been standardised and could be used at any moment, he added.

The NFC supplied all the fuel assemblies and components to the country's seven nuclear reactors.

Mr Balaramamurthy said the NFC was unique in many respects. It was the only complex of its kind in the world where uranium concentrates on the one hand and zirconium mineral on the other were processed at the same location to produce finished fuel assemblies and also zirconium alloy tubular components, for supply to the power industry.

The complex also symbolised the strong emphasis on self-reliance in the Indian Nuclear Power Programme. The advanced technologies for the production on nuclear grade uranium di-oxide fuel, zirconium metal and zirconium alloy tube components and the manufacture of fuel bundles conforming to reactor specifications were developed through systematic efforts since the late 1950s.

He said an important feature at the NFC was that apart from indigenous process development, a good portion of the plant equipment for chemical engineering and extractive metallurgy operations had been indigenously designed and fabricated.

He said that to keep pace with the expansion of the country's nuclear power programme, which is targetted to reach 6,000 by 2,000 A.D., the NFC had drawn up a perspective growth plan to raise the production capacity for pressurised heavy water reactor fuel to about 1,000 tonnes per year and zircaloy to 160 tonnes per year by the end of 1993-94. Towards this end, four projects had been planned with a total investment of about Rs 700 crore during the Eighth and Ninth plans.

Mr Balaramamurthy said detailed project reports for the four projects (three to be set up in Hyderabad and one in Tamil Nadu) had already been approved and financial sanction was expected shortly. In addition, the government had sanctioned the setting up of 1,000 tonnes per year titanium sponge plant by the NFC for co-location with the new zirconium sponge project at Palayakaval.

He said the NFC was an outstanding example of the successful translation of indigenously developed processes to production-scale operations. India was one of the few countries in the world which had their own integrated facilities for large-scale nuclear fuel fabrication.

The operations at the NFC involved many sophisticated processes, including solvent extraction (to achieve the

very high degree of purity), high temperature chlorination, reactive metal reduction, vacuum processing, hot and cold rolling, cold pilgering, high temperature sintering, special welding techniques and assessing the integrity of products with highly reliable evaluation methods.

The uranium fuel, the zirconium alloy tubing and the fuel assemblies had to conform to very stringent specifications in regard to chemical purity, micro structure, mechanical and metallurgical properties, structural integrity and dimensions. Accordingly, extensive quality control measures are adopted in process control and characterisation of the products in the intermediate and final stages.

As on March, 1993, about 92,000 numbers of fuel bundles had been fabricated and supplied to various pressurised heavy water reactors in the country. Similarly about 850 numbers of fuel assemblies had been supplied to boiling water reactors at Tarapur. Besides, all the zircaloy calandria tubes, zirconium alloy coolant tubes required for the two units each at Kalpakkam, Narora and Khakrapar had been fabricated at the NFC, meeting the stringent specifications and supplies as per the stipulated time schedule.

The initially designed capacities of the various plants at the NFC were being progressively increased to meet the fuel and zirconium alloy requirements.

Beryl To Be Exported

93WP0191B New Delhi *PATRIOT* in English
28 Apr 93 p 1

[Article: "Scarce N-Energy Mineral To Be Exported"]

[Text] Contrary to Jawaharlal Nehru's written directive against export of Beryl, a globally-scarce and extremely important mineral required for atomic energy technology, the government of India by its new "exim" policy of March 31, 1993, has made Beryl an exportable commodity.

Countries like Pakistan developing military nuclear capability would jump at this opportunity of obtaining Beryl from India, if necessary through third country dealings. Beryl is one of the 144 items which have been removed from the negative list by the government's order of March 31.

The Atomic Energy Commission's permission was not obtained before Beryl was made an exportable commodity. AEC chairman Dr R. Chidambaram, it is learnt, was asked a misleading question. He was in effect asked whether there was any scarcity of Beryl in India.

To this, Dr Chidambaram's reply predictably was in the negative. This answer to a misleading query was presumably adduced as the AEC's concurrence in the decision to export without an amendment of the statute under which it functions.

Nehru's written directive to be followed in respect of the minerals necessary for developing atomic energy is reproduced:

I am deeply interested in this matter not only on behalf of EAD (Department of External Affairs Ed.) but also as President of Indian Science Congress. Indeed, during the session of this Congress last January in Delhi, there were rumours to the effect that the Travancore Durbar has entered into an agreement for the disposal of monazite and thorium nitrate. This produced some consternation among many of the Indian scientists present and a special resolution was passed, as far as I remember, that the State should own and control all these minerals and specially any foreign exploitation of them should be prohibited. This resolution referred to all minerals and more especially and specifically to those minerals which are necessary for the production of atomic energy.

Dr Homi Bhabha, the Chairman of the Atomic Energy Committee, also spoke to me about this matter and said that it was exceedingly important that our mineral resources for atomic energy be preserved. If they are to be disposed of this should be done only on behalf of the Government of India and after full consideration of all concerned issues. This is not merely a financial matter. It has international implications. One important aspect of it is that if we agreed to give any of these very valuable minerals to any foreign country we should get in exchange a measure of cooperation from them in the production of atomic energy. We have in India some very distinguished scientists working on atomic energy and cosmic rays. They lack facilities. If they work in cooperation with their opposite numbers in the UK, USA, or France (the chief countries carrying on this research, apart from the USSR), India and the world would both profit by their work. It is not quite clear, even now, what the exact terms of the agreement between the Travancore Durbar and the British Government are. The Travancore Durbar's communique does not give the text of this agreement. It would appear that after the communique was issued some new agreement was arrived at in regard to monazite and thorium. Some reference to this is made in Mr Trevelyan's note of 24 February, wherein it is said that Mr Griffin gave some account of the agreement. I would have thought that the exact terms of the agreement should have been communicated to us formally and placed on the file.

The Atomic Energy Commission of the United Nations has already, as pointed out by Mr Trevelyan, recommended that there should be effective control of the production and use of uranium, thorium and their fissionable derivatives. This report will be considered by the Security Council next autumn. Meanwhile, I think we should proceed on the basis of this report.

I agree with Dr Bhatnagar's suggestion that the Central Government should not allow surplus monazite or thorium nitrate to be exported from Travancore except though the Government of India, who should purchase the whole of the produce. If the United Kingdom wants

any of this surplus it should deal with the Government of India. It is desirable, therefore, that an enquiry be made, as suggested by Dr Bhatnagar, in regard to the quantities of monazite sands involved in the transaction between Travancore State and the British Government or firm and the amount of money involved in the purchase of the whole produce monazite and thorium nitrate from Travancore State.

How we should proceed about this matter is for Commerce and other Departments to consider, but meanwhile the suggested enquiry would be useful.

The market value of thorium nitrate, though an important factor, is not the deciding factor. Apparently, the amount of money involved in the purchase of the whole production of monazite and thorium nitrate in Travancore is round about Rs 20 lakhs. The important consideration is first how much of it we must keep for India's requirements and secondly, on what terms we should give it to any other country, the terms including co-operation in atomic research. Again, if we are to give it to any other country, we should have direct transactions with it. This means that we should not give it to any country for it to pass it on to a third country. In direct dealings we can gain direct advantages.

There need be no question of the Government of India storing up vast quantities of these precious articles. What we may consider necessary for our use now and later must anyhow be protected and stored, whatever the cost. What is not necessary will be disposed of to our best advantage.

Similar considerations apply to Beryl.

In regard to the questions put by the Works Mines and Power Department. I would suggest the following answers:

- (i) It is desirable for the Government of India to prohibit the export of monazite and thorium nitrate from India. What is the best method of doing this is for the departments concerned to consider. This would mean that any export would be in accordance with the explicit permission of the Government of India and subject to the conditions laid down;
- (ii) This rule should apply to Beryl also;
- (iii) I am unable to say what is the best method of prohibiting or controlling exports of these essential minerals;
- (iv) I think the Government of India should agree to purchase all quantities of such minerals which may be offered for sale. The question of financing should not offer any difficulty, because of the very great value of these minerals. Primarily they should be employed in research work or industrial purposes in India. Secondly, they may be exported in the manner indicated above;

(v) the export of these minerals would necessarily be limited to particular countries. On no account can this matter be left to the discretion of exporters;

(vi) As I have mentioned above, Dr Bhatnagar's suggestions should be accepted. They appear to be supported by Mr Wadia, the Mineral Adviser.

On the whole, my views coincide largely with the decision of the Inter-Departmental Committee, except that I think the Government of India should be prepared to purchase all quantities of these materials and other enquires should be proceeded with to give effect to this recommendations.

In considering this matter expert scientific advice is obvious indeed. Fortunately, we have got Dr Bhatnagar and Mr Wadia to advise us. I would suggest, however, that Dr Homi Bhabha, the Chairman of the Atomic Energy Committee, might also be consulted as probably he knows more about the value and use of monazite, thorium nitrate and Beryl in connection with the production of atomic energy than other people in India.

Note dated February 27, 1947, File No. 17(4) (47 PMS; II) Selected Works of Jawaharlal Nehru, Jawaharlal Nehru Memorial Fund, Teen Murti House, New Delhi (1984) (Second Series), Vol. 2, pp. 604-607.

IRAN

Cooperation Protocol Signed With PRC

*LD0607165593 Tehran IRNA in English
1641 GMT 6 Jul 93*

[Text] July 6, IRNA—The Islamic Republic of Iran and the People's Republic of China on Tuesday signed a protocol for mutual cooperation in economic, technical and scientific fields.

Visiting Chinese Deputy Prime Minister Li Lanqing and Iran's Vice President Hamid Mirzadeh termed the protocol inked at the end of the 7th Tehran-Beijing joint economic commission meet here as a "new horizon" in expansion of bilateral political and economic ties.

In remarks before leaving Tehran at the end of a 4-day visit, the Chinese official said the agreements reached between the two countries on subway, cement and power plant would soon be implemented.

He expressed hope that by increasing the capacity of her oil refineries, China could refine more Iranian crude oil in the future.

Mirzadeh said the two countries were to make joint investment in setting up an oil refinery in China to refine crude oil for the Islamic Republic.

Referring to an agreement concluded by Iran and China for cooperation in nuclear energy for peaceful purposes,

Mirzadeh made it clear that such cooperation would be carried out under supervision of the International Atomic Energy Agency.

China has agreed to grant Iran a \$150 million and \$120 million in credit for construction of subway and a cement factory, Mirzadeh said.

The Iranian official said that Iran and China would also cooperate in such fields as mine exploration, geology, fisheries, chemical and pharmaceutical industries, electronics, steel, ferrochrome and ferrozinc.

Building small hydroelectric power plants and cooperation in communication and satellite, agricultural and shipping fields are among other agreements reached between Tehran and Beijing, he said.

He said Chinese oil companies were to increase their oil imports from Iran to balance Tehran-Beijing trade exchanges.

PAKISTAN

Non-Proliferation Talks With U.S., India Advocated

93WP0178B Karachi DAWN in English 16 May 93 p 9

[Text] Karachi, May 15—Pakistan has recently expressed interest in more structured bilateral talks with the United States on non-proliferation and regional security issues.

There has been some progress on certain issues in discussions held by the Clinton administration with Pakistan in the recent past and Washington would seek further concrete measures in proposed bilateral talks.

The Clinton administration, according to informed sources here, noted that Islamabad has already agreed to participate in a multilateral discussion on regional security and non-proliferation, has signed the Chemical Weapons Convention (CWC) and stated that it will not transfer nuclear technology to other countries.

Pakistan, in addition, has made a number of regional non-proliferation related proposals, and has shown willingness to accept any non-proliferation measures agreeable to India.

The sources explained that US diplomacy in South Asia has had as its goal an improvement in understanding among India and Pakistan of the issues of arms control and confidence-building measures.

Washington believes that additional near-term measures, in addition to their intrinsic value, could be used

as part of a phased approach towards the eventual elimination of weapons of mass destruction (WMD) from South Asia.

These measures include a unilateral or regional cutoff of fissile material production, a regional agreement not to conduct nuclear detonations, placing safeguards on new and existing nuclear facilities and early ratification and implementation of the provisions of the chemical weapons convention.

In addition, formal policy commitments for export controls on nuclear, chemical weapons (CW), ballistic weapons (BW) and missile materials and technology, in accordance with the various non-proliferation regimes.

Tightening export administration of nuclear, CW, BW, and missile related materials and technology, holding an international seminar possibly under IAEA auspices on nuclear safety, compliance and verification of nuclear agreements.

Security assurances and extending the nuclear no attack pledge to cover population centres in India and Pakistan.

The Clinton administration, the sources pointed out, has suggested such steps because it believes they could contribute to an improved non-proliferation climate in South Asia and enhance regional security, while reducing tensions and improving Indo-Pakistan relations.

In addition, measures to strengthen national export control policies will reduce the attractiveness of South Asia as a source of material, technology and revenue for potential proliferation countries.

Besides, measures on WMD related steps, the Clinton administration wants to encourage further efforts aimed at tension reduction and enhanced regional security and stability such as an Indo-Pakistan dialogue on Kashmir, focusing initially on achievable near-term steps such as demilitarisation of the Siachen Glacier and action by both states to cease support for militants who commit terrorist acts in the other.

An expanded Indo-Pakistan dialogue to cover not just nuclear weapons and ballistic missile delivery systems, but also conventional arms limitation, consideration of a force build-down coupled with reductions in defence budgets and increased transparency of defence expenditures and major acquisitions.

Adoption of additional non-nuclear confidence and security building measures (CSBMS) between India and Pakistan such as establishing regional risk reduction centres, adopting open skies treaty provisions, creating a hotline between air force chiefs of air operations to monitor air space violations, prior notification of major military exercises and invitation of observers from each side and initiating regular military exchanges.—PPI

U.S. Anti-Proliferation Policy Said Based Only on U.S. Interests

93WP0178A Lahore *THE PAKISTAN TIMES*
in English 19 May 93 p 6

[Article by EAS Bokhari: "Pakistan and Nuclear Weapons: US Perception"]

[Text] This presentation provides a glimpse into the US perception and is based on the US Congressional research service material. According to the US perception "...For years Pakistan has continued to inch its way towards nuclear weapons although there is no official US confirmation that it has tested a nuclear explosive or has made atom bombs. Pakistani officials continue to publicly deny that their country is making them." (See CRS Issue Brief—Pakistan & Nuclear Weapons Code IB 86110 Update August 21, 1991 by Dr. Warren H. Donnelly and Dr. Zachary S. Davis.)

US had cut off aid to Pakistan previously as well, but in 1979 all US economic and military aid to Pakistan was terminated because of its alleged nuclear activities under Section 669 of the Foreign Assistance Act (of 1961) because of Pakistan's attempts to acquire enrichment technology. The Soviet invasion of Afghanistan later in 1979, however, caused a shift in the US priorities in relations with Pakistan. And then a new section i.e. 620-E was added to the Foreign Assistance Act of 1961 that allows the President of USA to waive Section 669 in order to provide assistance to Pakistan "if he determines that to do so is in the interest of the United States."

Congressional concern continued over the issue, and in August 1985 the Congress amended Section 620-E to require the President to certify *annually* to the Congress that Pakistan does not possess a nuclear explosive device and that the proposed US assistance will reduce significantly the risk that Pakistan will possess such a device (the Pressler Amendment, PL 99-83).

Attempts to repeal the Pressler Amendment in the 102d have not been successful and the President must make his certification in each financial year for which the aid is requested. The latest certification was made by President Bush on 5 October 1989 for the financial year (FY) 1990. This was greeted with scepticism by the US Congress and so was the decision to "extend the President's waiver authority for only one year to 1 April 1991 (PL 101-167)". The President surely did not make any more certifications.

According to US sources, it has been reported that Pakistan has tried at least three times over the past year (1990) to buy American-made high temperature furnaces that can be used in manufacturing nuclear weapons. "The arrest in Germany on July 11, 1991, of a retired Pakistani general sought by the United States for smuggling nuclear-related materials, has raised new questions about Pakistan's clandestine nuclear programme. The retired general Inam-ul-Haq has been linked to the Bank

of Credit and Commerce (BCCI) which financed illegal exports of nuclear-related materials to Pakistan."

The CRS continues with the Pakistani nuclear issue and maintains that the new government took over under Prime Minister Nawaz Sharif on 6 November 1990, and commenting on the aid cut-off, the new Prime Minister said on 6 December 1990 "...conditions are being laid down for a resumption of US aid, but my government will never bargain on national interests for a few million dollars and abandon its nuclear programme."

Somewhat rather surprisingly—in spite of "love-hate" relationship between USA and Pakistan, Pakistan and India agreed in January 1991 to implement a treaty banning attacks on each other's nuclear installations. The CRS briefing continues "...How Pakistan's nuclear activities will change, if at all, under Sharif's administration remains to be seen."

The crux of the issue summed up in the CRS, and the possible US options is contained in the paragraphs below:

According to US perception, many quarters claim that Pakistan can now produce or is producing weapon's grade uranium. It apparently continues to do so despite US pressure. There are new reports that Pakistan is working on the non-nuclear parts of atom bombs. All of this raises concern that Pakistan can make or may have made a few nuclear bombs. This would endanger US interests in South Asia "and would be a defeat for the United States policy of avoiding the further spread, or proliferation of nuclear weapons. At issue are the nature of Pakistan's nuclear activities; what the United States can do to keep Pakistan from making nuclear bombs; whether the Bush Administration will certify that Pakistan does not have nuclear weapons—a precondition for continued US economic and military aid; whether changes will be made in the certification requirements and other amendments to the Foreign Assistance Act; and what new non-proliferation conditions, if any, should be added to extension of US aid to Pakistan."

In sum, it appears that the US policy is eclectic and when their interests are involved, the certification becomes possible, and when there are no such interests—the impediments are created which are not quite rational and are highly discriminatory.

Indian Expert on Pakistan Missile Development

93WP0185 Bombay *THE TIMES OF INDIA* in English
20 May 93 p 13

[Article by N. Suresh: "Pak Developing New Missiles"]

[Text] New Delhi, May 19. Pakistan is developing three missiles based on French rocket technology, and one of it is designed to hit Delhi with a 500 kilogram nuclear warhead from deep inside their territory, according to a study by an Indian space scientist.

Dr. S. Chandrashekar of the Indian Space Research Organisation (ISRO), Bangalore, says in his study that Pakistan is developing three missiles, and not two, as was believed earlier. The three missiles under development are: Hatf-1, Hatf-2 and Hatf-3 (two versions)

The study, published in the March issue of the American magazine, *Missile Monitor*, says the major threat to India are from Hatf-2 and 3 missiles. The Hatf-3, designed to have a range of 800 km, can reach the capital from locations fairly deep inside Pakistan.

The Hatf-2 cannot reach the capital with a nuclear warhead. However, it can do so with a conventional warhead weighing between 300 to 400 kg. It is designed to have a maximum range of approximately 280 km. The single stage Hatf-1, already flight-tested, has a range of about 60 km.

Mr. Chandrashekar's analysis rules out reports that Chinese could have helped Pakistan in the development of these missiles. Details about the technical parameters of the Pakistani missiles indicate, he says, that they are derived from French rocket technology used for making sounding rockets.

Although the Chinese SL-2 (ship-to-shore) missiles have technical parameters similar to that of Hatf-1, available evidence and technology considerations would tend to favour a French connection rather than a Chinese one, indicates the study.

When the technology was transferred by France, it was well within the compliance limits imposed by the Missile Technology Control Regime (MTCR), initiated by the world's seven most industrialised countries. The MTCR prohibits transfer of technology for missiles with ranges more than 300 km and maximum payload of 500 kg.

Hatf-1, reportedly tested for the first time in 1989, is a single stage, six metre long missile with a diameter of 55 cm. This is similar to the Dauphin sounding rocket (5.8 metre long, 54.9 cm wide, single stage rocket, maximum range of 100 km with 250 kg payload) developed by the

French aerospace company, Aerospatiale. France is known to have transferred the sounding rocket technology to Pakistan.

The study says the facilities for production of sounding rockets with a diameter of 55 cm could be used as a base for development of larger diameter solid rocket motors. From 55 cm, the diameter of the rocket motors could be increased to about 100 cm with no major efforts and through use of the same facilities.

This is precisely what Pakistanis may be doing, surmises the study. For the first version, Hatf-3 would have a length of about 12 metres and a booster with a diameter of 82 cm. In the second version, the Hatf-3 could have a length of about 10 metres and a booster with 100 cm diameter.

There are several inconsistencies in the technical details of Hatf-2 and 3 available in the international journals. The Indian study, after checking various details, says it is logical that the Hatf-2 is a two-stage version of Hatf-1 and the Hatf-3 uses a larger diameter booster with a Hatf-1 second stage.

If Hatf-1 was fully tested in 1989, as claimed by Pakistan, it should have been deployed in 1991 itself, the analysis said. The deployment schedule, on this basis, for Hatf-2 should be 1993-94 and the Hatf-3 in 1996-97.

However, the study says, the assumptions on the deployment schedule depends on Pakistan mastering a number of critical missile technologies. These include manufacture of critical raw materials for propellant production (polymers, ammonium perchlorate, aluminum powder), guidance and reentry technologies.

These schedules also assume that Pakistan has production facilities for propellants including some indigenous development of materials to substitute imported ones that are likely to be restricted by the MTCR. These dates are optimistic and delays up to two years could be expected because of MTCR and the need to indigenise critical technologies.

A major testing phase is also required before these missiles are operationalised.

RUSSIA

Yeltsin Responds to Nuclear Test Moratorium Message*LD0307122793 Moscow ITAR-TASS in English
1146 GMT 3 Jul 93*

[By ITAR-TASS]

[Text] Moscow July 3 TASS— President Boris Yeltsin received Strobe Talbott, special adviser to the U.S. secretary of state for CIS affairs, in the Kremlin on Saturday.

They discussed matters connected with the forthcoming meeting between the Group-of-Seven leaders and Russia in Tokyo, the presidential press service reported.

Bilateral Russian-U.S. relations were touched upon as well.

Mr Talbott delivered Bill Clinton's message to Boris Yeltsin. The message, referring to accords between the presidents of Russia and the U.S., conveys a U.S. intention to extend the moratorium on nuclear tests until September 1994.

Yeltsin reaffirmed Russia's principled stand that Russia would observe the announced moratorium until any other moratorium-observing nuclear state resumes tests.

Case for Treaty on Banning, Nonresumption of N-Tests Argued*PM0607082993 Moscow IZVESTIYA in Russian
2 Jul 93 First Edition p 3*

[Aleksandr Sychev article: "Nuclear Test Moratorium Has Ended. Ranges Are Still Quiet"]

[Text] Rjukan-Moscow—The moratorium on nuclear tests announced by Russia, France, and the United States expired 1 July. This day has every chance of going down in history either as the day a decisive step was taken away from nuclear madness or as a day of missed opportunities.

Two major international conferences held by the Russian Peace and Accord Federation in Moscow and by the Norwegian Consultative Council on Arms Control and Disarmament in the town of Rjukan, known for its plant for the production of heavy water, were devoted to the banning of nuclear tests and the closely associated problem of the nonproliferation of nuclear weapons. Incidentally, it was at this plant during the war years that Norwegian patriots carried out sabotage, thanks to which fascist Germany did not have time to acquire nuclear weapons.

It is no coincidence that the world public devotes such close attention to what might happen after 1 July. A great deal has changed since the nuclear ranges fell silent. Today it is a question of the need to conclude a treaty not

only on a total ban on nuclear explosions, talks on which the U.S. and Russian presidents promised to embark upon at their meeting in Vancouver, but also on their nonresumption. As is known, Russia and France have expressed readiness not to commence nuclear tests until one of the five nuclear powers conducts an explosion first. China, while not adopting any pledges, has so far refrained from testing. Britain is conducting its own work under the program for creating the Trident systems on a U.S. range. So the maintenance of silence today depends totally on Beijing's position and President Clinton's decision, which is expected within a few days.

The Washington administration has three options: to extend the moratorium through 1 July 1994, extend the moratorium until someone carries out the first explosion, or carry out not the 15 tests permitted by Congress before September 1996 but nine. Former U.S. Defense Secretary James Schlesinger, who attended the Rjukan conference, assumed that President Clinton would prefer the second option. Without going into the nuances, THE WASHINGTON POST recently cited sources in the administration as reporting that the President is tending toward extending the moratorium.

The danger of the first explosion after the moratorium, whoever carries it out, consists in the fact that it will cause a chain reaction. It will free the other nuclear powers from moral obligations—which will undermine the nuclear nonproliferation regime and lead to an arms race, in which the so-called "near-nuclear" states will join. Among them I should, above all, single out Israel, India, and Pakistan, which are in zones with an increased threat of an outbreak of war.

The 25-year term of the Treaty on the Nonproliferation of Nuclear Weapons, which has been signed by 157 states, will end in March 1995. They will all gather for a conference to resolve the question of extending the treaty and, if so, for what period. The conference held in 1990, by the way, ended in failure because of the position of the United States, which refused at the time to hold talks on a total test ban. Washington's present agreement to embark on talks if explosions are resumed, even in the form of a limited series, will most likely not save the treaty.

More than two-thirds of the parties to it belong to the group of countries of the Nonaligned Movement, which accuse the nuclear powers of using delaying tactics on the question of tests in an attempt to keep their monopoly on nuclear weapons. Just a simple majority of 79 votes is required to decide the fate of the treaty and, along with it, that of nuclear disarmament and all civilization. Which way the scales will be tipped today depends, as the appeal adopted at the forum held in Moscow states, on whether the nuclear powers adopt a pledge not to be the first to resume explosions and to begin talks without delay on the total cessation of nuclear tests everywhere.

Ukraine's Pro-Nuclear Moves Could Prompt 'A New Arms Race'

PM0707133193 Moscow IZVESTIYA in Russian
7 Jul 93 First Edition p 3

[Aleksandr Sychev report: "Ukrainian Parliament Upholds Right To Own Nuclear Weapons"]

[Text] The events which occurred in the Ukrainian parliament last Friday [2 July], when there was a vote on the draft "Basic Dimensions [napravleniya] of Ukrainian Foreign Policy" submitted by Foreign Minister Anatoliy Zlenko, took an unexpected turn a few days later.

It is known that 226 legislators voted for the draft, and 15 against it. One of the document's provisions was a confirmation of Ukraine's pledge to become a nuclear-free state. At the very last moment Dmitriy Pavlychko, chairman of the Foreign Policy Commission, submitted an amendment stating that Ukraine in its foreign policy supports the idea of full nuclear disarmament. The text goes on to state that, for historical reasons, the republic became "the possessor of the nuclear weapons which it inherited from the former Soviet Union." Ukraine does not approve of their use and excludes the nuclear weapons factor from its foreign policy.

A conflict situation arose in connection with a variant interpretation of the voting results. According to the procedure adopted in the Ukrainian parliament, each amendment must be examined by deputies separately from the draft of the proposed document. Pavlychko's addition was not subjected to this procedure. This gave the Ministry of Foreign Affairs the right to consider that it had not been adopted and that Ukraine had announced that its official policy was to implement the protocols to the Treaty on the Reduction of Strategic Offensive Arms (START I) and to the Treaty on the Nonproliferation of Nuclear Weapons signed by President L. Kravchuk in Portugal.

The members of parliament, however, did not agree with the Foreign Ministry's viewpoint, declaring that the proposed amendment had become law. Speaking in strict juridical language, the "Basic Provisions [polozheniya]" are not considered a legislative act and in no way belittle the significance of Kiev's adopted pledges to rid Ukraine of the nuclear arsenal left on its territory "for historical reasons." Although this document defines the main foreign policy aims, which the government is recommended to try to achieve, so as not to have complications with the legislators.

"We no longer do as we are told by the Foreign Ministry," Bogdan Gorin, deputy chairman of the Foreign Policy Commission, explained parliament's position. It is thought, however, that the deputies' actions are dictated not by a sense of contradiction and a desire to confirm their lawmaking right by any means, even the most thoughtless means.

This is not the first attempt by a group of Ukrainian parliamentarians to secure nuclear status, which, in their opinion, will at once place the republic among the top-ranking world powers and give it a strong trump card in international affairs. A number of observers in Moscow also point out that the recent bombing of Baghdad by U.S. aviation [as published] played a definite role in galvanizing supporters of the nuclear right. At the time Kiev voiced its disagreement with that operation in a reasoned manner, while the nationalistically-minded parliament drew its own conclusions—nuclear weapons should be preserved as a guarantor of security.

One more serious bid has thereby been made for the right of ownership and, thus, for nuclear status. We know even now what this could lead to. If the Ukrainian parliament achieves its set aim, the nuclear nonproliferation regime will be undermined in the near future, and mankind risks being drawn into a new arms race, whose participants will be not only the five recognized nuclear powers plus Ukraine but also many other "near-nuclear states." Under these conditions it will be absurd to speak of security. In the shorter term we should obviously expect a further complication of Kiev's relations with its neighbors and partners in the West.

Scientist Disputes Worth of Plasma Weapons

MK0807111093 Moscow NEZAVISIMAYA GAZETA
in Russian 8 Jul 93 pp 1, 2

[Interview with Aleksey Kuzmin, chief designer of AWACS and space control systems, associate of the Telecommunications Research Institute, by Andrey Vaganov in "Armaments" column: "Russia Has No 'Plasma Weapons.' And it Is Not Likely To Get Any in the Foreseeable Future;" place, date not given—first two paragraphs are introduction]

[Excerpts] Prior to the April summit in Vancouver between the presidents of Russia and the United States IZVESTIYA (2 April 1993) published a sensational story under a front-page banner headline: It was about the possibility of the summit's discussing a joint large-scale Trust project, proposed by the Russian side, to repulse missile attacks with the help of so-called plasma weapons. The physical essence of the experiment could be briefly summed up as follows. Before any object moving in the earth's atmosphere a plasma cloud is created by a ground-based SHF [super-high frequency] emitter or laser generator, which (according to IZVESTIYA) ".... fully destroys the flight aerodynamics of a missile or aircraft. The object leaves its path and disintegrates under tremendous pressure." It also provided a plan of the experiment and a commentary by the author of this idea, Rimil Avramenko, chief designer at the Scientific and Research Radio Engineering Institute.

I have already had occasion to point out (NEZAVISIMAYA GAZETA No. 113 of 19 June 1993) the strange absence of any information about the results of the discussion of this undoubtedly outstanding experiment.

that is, if it ever took place at the April summit. Just recently NEZAVISIMAYA GAZETA came by additional information shedding light on some aspects of the problem of developing "plasma weapons." I asked Aleksey Arkadiyevich Kuzmin, general designer of missile attack early warning and space control systems, an associate at the Telecommunications Research Institute, to comment on this information.

[Vaganov] The report about a proposed joint "plasma weapon" experiment has provoked a stormy reaction in the Russian press. What was the reaction to it in the West?

[Kuzmin] These articles, in particular in IZVESTIYA, were reprinted and commented on by many U.S. papers. For the most part this information was perceived across the ocean as absolute truth, although some publications did voice their doubts. This question now has not only a scientific and technical but also a political dimension.

[Vaganov] Presumably, this has to do with the fact that the Trust project directly bears on the Soviet-U.S. Treaty on the Limitation of Antiballistic Missile Systems [ABM] of 1972?

[Kuzmin] Generally speaking, the ABM problem has several aspects. Somewhat simplifying the situation, all ABM systems can be divided into tactical missile ABM systems and strategic missile ABM systems. Avramenko's proposals are basically concerned with strategic ABM systems. In 1972, as a result of lengthy negotiations, the sides came to the conclusion that ABM systems, if they are not limited by a particular framework, are a destabilizing factor. Therefore when the issue of ABM system development is raised, this provision is automatically called into question. But both on our side and on the U.S. side there are some people and organizations that are trying at the very least to expand the restrictive framework that was adopted in 1972. The main limitation, it will be recalled, is that ABM systems may be created solely in one of two districts: around the capital of a corresponding state or around one of the ground strategic force bases. The Americans chose the second option, and we chose the first. Interestingly, the Americans fairly quickly froze work on developing a strategic ABM base.

[Vaganov] How would you account for this: by the fact that such systems are extremely complicated, or because they have failed to put it in place for some other reasons?

[Kuzmin] No, the U.S. ABM system created at the time was fairly perfect. But the whole point is that it is very difficult to ensure protection of a particular object by this method.

Deterrence was and still remains the main means of counteracting a missile attack. By this is meant not direct defense against missiles, but a means that allows without fail to ensure such a response that a) would always be adequate to the attack itself; and b) would always strike

a blow against an enemy in such a form that the enemy would suffer greater damage.

There are facilities in Russia which ensure control—and this is the most difficult condition—of information about attack: single, group, or massive, planned or accidental. There is an instrument system that has been on alert duty for 22 years. Over the last seven years I have been general designer of this system. And the experience of the last few decades has shown that our system is operating fairly reliably. During this time there have been various instances which, in the absence of such systems, could have led to conflicts.

In other words, two paths could be used: direct defense and the creation of means to prevent a unclear attack—mutually assured destruction. But many, including the Americans, are not satisfied with this policy. To live under the threat of any fear is simply unacceptable for the Americans—such is their mentality. This is why time and again they, as well as we, have come out with proposals to move away from mutually assured destruction as a means to prevent war into the sphere of direct defense. And this approach is not meaningless in principle, although as far as I am concerned, I think that it is incorrect since, I repeat, any strategic ABM system is a destabilizing factor.

On the other hand, proliferation of nuclear weapons is a reality. Therefore it would be wrong to say that in 1972 we concluded a treaty and that we must live according to it for the next hundred years. New aspects will appear. The question about ABM development remains legitimate. But as to which ABM systems, this is another matter.

[Vaganov] This is on the philosophical side of the issue, so to speak. Now let us talk about the equipment

[Kuzmin] Naturally, many scientists are thinking about what new proposals could be made to resolve the ABM task. Today, however, the question should be raised not about defense of any particular target but of a multitude of targets, or even an entire territory, from single missiles. And interest exists in many countries as to how to make this better and cheaper. One of the proposals along this line is the Trust project by Rimily Avramenko and his colleague on creating "plasma weapons."

[Vaganov] What are the purely physical foundations of this idea?

[Kuzmin] Complex ballistic targets include not only warheads proper but also decoy targets. To identify them is a complicated selection task which has not been unequivocally resolved up to now. Radiation destruction means—laser and SHF means, as proposed in the Avramenko project, seemingly resolve this task in principle since the number of equivalent responses is unlimited. In other words, all targets—both genuine and false—could be destroyed consecutively. This is attractive. Second, it would include nonnuclear interception. If only it could work just as well!

[Vaganov] Presumably, there are some limitations here since you are talking about "plasma weapons" in the subjunctive mood?

[Kuzmin] Indeed, with the help of large phased-array [fazirovonnaya] antennas—tens of thousands of emitters organized in a certain fashion—it could be possible to concentrate a beam of electromagnetic energy in a fairly small volume. It is with the help of this focusing of energy that warheads are supposed to be destroyed. Current estimates show that the energy flow needed to destroy a warhead frame by heating is between 10 and 100 KJ [exact expansion unknown, possibly kilojoules] per square centimeter. These are very, very high magnitudes. All attempts to find ways of reducing them—and I have also taken part in these attempts—have failed. [passage omitted]

[Vaganov] How would you comment on this statement from IZVESTIYA's article: "... research on this subject has moved from laboratory walls to a full-scale [naturnyy] experiment"?

[Kuzmin] As far as I know, a full-scale experiment is the continuation of those laboratory experiments that preceded the invention itself. Yes indeed, on an earth trajectory—hundreds of meters—plasma discharges were created, and an object under investigation (roughly speaking, a bullet) deviated from its usual path. I think that this is precisely what is meant with the "full-scale experiment" mentioned in the article.

No one questions the influence of SHF discharges on aerodynamics. But the scale of this influence, according to a majority of experts, including myself, is very negligible.

When this line of investigation was beginning (many other scientists and organizations were involved in this work in addition to Avramenko; considerable funds were spent), the targets were warheads of a particular class that were in service in the armed forces at the time. By present-day standards they were not very strong. For instance, modern warheads can penetrate several dozen meters (!) deep into the ground without being destroyed. Now compare this: Can this kind of warhead be destroyed by the impact of "plasma weapons"? This, of course, is not strict physical proof of the prematureness of any talk about "plasma weapons"—it is merely a comparison, but it gives some idea of the problem involved. The conditions for causing damage by "plasma weapons" have not been sufficiently elaborated, even in theory.

[Vaganov] What do you think brought about this appeal to the U.S. Administration on conducting a full-scale Trust experiment, which implies a profound obligation?

[Kuzmin] Nothing but the incompetence of some officials, on one hand, and Rimiliy Fedorovich Avramenko's persistence on the other.

[Vaganov] And if this business came off, that would mean appropriate funding....

[Kuzmin] This is one of the main reasons.

[Vaganov] But the institute where you work and the institute where Avramenko works are affiliated with the same intergovernmental joint-stock corporation, Vympel. Did you have any preliminary discussion of this project?

[Kuzmin] No, there was no discussion—for fairly understandable reasons: With the exception of the project's author, all other specialists do not share his viewpoint on the immediate prospects of "plasma weapons." And since the Trust project looks very attractive, it was very easy to get it through high-placed but incompetent, in this particular area, state bureaucratic barriers.

[Vaganov] It seems that Clinton has competent advisers who gave him the right recommendation at the right moment?

[Kuzmin] I would say that it was our president's aides who proved to be more competent and more cautious. Yeltsin went to Vancouver with an agenda that did not include this question. In the draft it was present, yes. But only in the draft.

[Vaganov] In other words, we have therefore saved a few billion?

[Kuzmin] First of all, we have saved our scientific prestige. It was wrong to make this sort of proposition without serious consideration, without a serious discussion in the first place. I believe that at present there is no reason to discuss such projects, I am sure. I am convinced that a majority of experts also think so. The Trust project is a crazy idea. But not the direction of work as such.

Government Stresses High Accuracy Weapons

LD0607155193 Moscow Radio Moscow World Service in English 1500 GMT 6 Jul 93

[Text] Russia has drafted a program of arms production until the year 2000. This was said by First Deputy Defense Minister Andrey Kokoshin at a news conference in Moscow.

The new program will give priority to high accuracy weapons and latest means of warfare.

At the same time the present assortment of arms will be reduced. For the land forces, for example, it will be reduced down to one third.

Andrey Kokoshin also called attention to the problems of financing defense industry plants.

Unpaid Wages Threaten Projects at Nuclear Research Center

Low Wages Not Paid on Time

LD0407112593 Moscow Russian Television Network in Russian 1000 GMT 4 Jul 93

[From the "Vesti" newscast]

[Text] [Announcer Sergey Vosyanov] Our correspondent reports: The situation in the nuclear town of Chelyabinsk-70, formerly a closed town, has heated up considerably. [Correspondent Shesterkina video report shows a rally, man talking, and an aerial view of the town]

[Shesterkina] The critical condition of the Russian Federal Nuclear Center, or Scientific Research Center of Technological Physics, has come to a head, and the institute staff staged a rally. The social tensions in the collective flared up after the wages, low as they are, had not been paid on time.

The rally adopted a resolution addressed to the president which says, inter alia:

[Begin recording] [V. Gorshkov, deputy head of the trade union committee of the All-Russian Scientific and Research Institute of Technological Physics] If this critical situation continues, the Federal Nuclear Center will be forced to discontinue work on state programs, including those connected with international treaties on control, destruction and nonproliferation of nuclear armaments, and those on ensuring the safety of the amassed nuclear weaponry. [end recording]

Center Ready for Strike Action

LD0607084693 Moscow ITAR-TASS World Service in Russian 0445 GMT 6 Jul 93

[By ITAR-TASS correspondent Yevgeniy Tkachenko]

[Text] Chelyabinsk, (southern Urals), 6 Jul—The Russian Federal Nuclear Center in the Urals is ready to take strike action. Staff of the All-Russia Science and Research Institute for Physics Technology said at a rally that delays in financing for the center's main area of work have brought the testing, transport, and power-engineering departments to the verge of standstill. Health care and social welfare in the closed city of Chelyabinsk-70 are paralyzed, and wages for May and June have yet to be paid. Speakers at the rally said that all this is leading to a weakening of nuclear arms control and increasing the danger of an emergency in a crucial industry.

Deputy Director of the Institute, Vladislav Nikitin, told ITAR-TASS that numerous appeals by the Urals nuclear industry workers to all the top powers in the land have gone unanswered.

Those who took part in the rally sent a message to the president, Supreme Soviet, and government in the name of the nuclear center, setting out a number of vital

demands. They include that the center be confirmed in law as a state-financed organization in the defense and defense conversion sector, that sufficient financing for the center be found immediately with an allowance for inflation, and that staff receive their May and June wages by 10 July with compensation for losses through inflation. If these demands are not met and if a critical situation develops, the Russian Federal Nuclear Center will be forced to halt work on state programs, including those linked to the International Treaty on Control and Destruction of Nuclear Weapons and Safety of Nuclear Stockpiles [reference unclear, INF Treaty possibly meant]. The work force at the institute believes, however, that this must not be allowed to happen, and that the federal authorities will be entirely responsible for the possible consequences.

Director on Firm's Red Mercury Connection

934K1660C Moscow ARGUMENTY I FAKTY in Russian No 26, Jun 93 p 12

[Unattributed answer to a reader's question]

[Text] Some time ago Vice President A. Rutskoy unmasked the machinations regarding red mercury. I am interested how this all ended.—A. Yelfimov, Kozelsk

We found out that the red mercury affair has taken an unexpected turn.

Moscow City Court is looking right now into a lawsuit filed by Promekologiya Concern against Russian Federation Vice President Aleksandr Rutskoy. He had accused this concern of illegally selling red mercury abroad. According to some data, this substance may be used in high-precision weapons systems—missile and rocket guidance systems. The brouhaha around the mysterious chemical substance does not subside. There is even a version that such mercury does not exist and cannot exist at all. It is supported by scientists from all sorts of research institutes. But Promekologiya Concern's President Oleg Sadykov insists that he, and only he, has in his possession the unique secret technology for red mercury production. This is what he told our correspondent:

"Following the directive of the Russian leadership, we have set up production of three modifications of a unique product with high potential for hard currency earnings, known on the world market as 'Red Mercury.' We have kept the president's administration, the Russian Federation Ministry of Security, and over the past few months also the Russian Federation Procuracy, constantly apprised of our activities; Russian Federation Vice President A. Rutskoy was on the distribution list for our documents sent through official channels.

"On 17 March 1993, we signed a contract to deliver to Western consumers a total of 84 tonnes of red mercury for a total amount of \$24.2 billion. In accordance with previous agreements, we have immediately notified the Russian Federation Ministry of Security, the Russian

Federation Procuracy, and the president's administration. We believe that in the past materials of the red mercury type were smuggled abroad illegally for the gain of the higher party nomenklatura. We, on the other hand, wanted to sell it legally, under the oversight of official organs of power and without any harm to strategic interests of the state. As a result of behind-the-scenes maneuvers, however, we received a notification repealing the first directive of the leadership. In other words, the concern was banned from even producing red mercury.

"As a result, Russia will sustain billions in losses. I believe that a court investigation will clarify the situation around red mercury."

Red Mercury Seen as a 'Fiction Used in Money Laundering Scam'

*PM0207084193 Moscow PRAVDA in Russian
1 Jul 93 pp 1,2*

[Interview with Major General Aleksandr Gurov, director of the Security Ministry Scientific Research Institute of Security, by Aleksandr Chernyak: "Is There a War on in Russia? Who Is Winning It: The Armed Mafia or the Unarmed People"]

[Excerpts] Major General Aleksandr Ivanovich Gurov, director of the Security Ministry Scientific Research Institute of Security and a Russian people's deputy, who has devoted his life to fighting organized crime, is categorical:

"What is happening is something we criminologists warned about, indeed rang the alarm bells about back in 1988. The mafia, organized crime, and rackets are flourishing...." [passage omitted]

[Chernyak] Aleksandr Ivanovich, I know you once worked on a commission dealing with "red mercury." Vice President A. Rutskoy raised the question in very strong terms in parliament. PRAVDA has written about it. The president promised to look into it. Time has passed, but nothing has been heard. Although there is talk that "red mercury" does not actually exist. What is it, then, in fact? What crime are we talking about?

[Gurov] It certainly is a complicated business. I would compare it to the medieval alchemists' involvement with gold. But the matter is as simple as it is complicated. Red mercury, or, rather, a substance that dense, does not exist. But there is such a thing as red mercury. It is a slang term for oxide of mercury.

He was a smart man who invented the term red mercury. He had thought of a way of making money out of nothing. Some rogues were arrested for actually producing a liquid colored with brick or paint.

[Chernyak] But what were they selling abroad?

[Gurov] That is what they were selling. Although they actually sold nothing.

[Chernyak] What do you mean nothing, when there was an entire concern involved in the Urals?

[Gurov] It existed and it still does. But it has not sold anything. Sure, several kilograms of so-called "red mercury" were found at customs, but it was an ordinary oxide. All the world's intelligence agencies have been investigating "red mercury" and they have all reached the conclusion that there is no such substance. The Americans carried out a full-scale study, and the Department of Energy's findings bluntly state that it is a standard ploy, and, incidentally, the Americans prohibited their firms from making deals involving "red mercury." So the compound does not exist, although everyone is seeking it. Prices of the product are increasing at a fantastic rate and are approaching 1.2 million rubles per kilogram. There are documented sales. But there is none of the actual product. If one assumes that rare earth metals are being exported, the reasonable question is: What is the sense in buying them at that price? Gold, platinum, plutonium—they all cost much less.

It is an interesting fact that there is not a single customer firm in any of these deals, that is, there are only middlemen. There are documents, middlemen—and massive prices. One can only assume that since the substance does not exist, but the documents do, since there are no customers at the end of it, but there are middlemen, and since there are documented bank payments and money is changing hands, it means that what we have here is the laundering of enormous sums of money.

[Chernyak] What kind of money is this? Drug money?

[Gurov] Maybe. At any rate, it bears the familiar hallmark of organized crime. Let us see what the investigation has to say. [interview ends]

OK, let's wait. But in the meantime.... In the meantime there is a war on in Russia.

UKRAINE

Supreme Soviet Official on Arms Trade Control

*934K1464A Kiev GOLOS UKRAINY in Russian
10 Jun 93 pp 3-4*

[Paper presented by V.V. Durdynets, first deputy chairman of the Supreme Soviet of Ukraine, to international conference "International Arms Trade in the Transitional Economy"; date not given: "Taking Account of the Sovereign States' National Interests"]

[Text] An international conference on the theme "International Arms Trade in the Transitional Economy" was held 24-26 May in Washington (United States) on the initiative of the Global Attitude organization. Members of the U.S. Congress, representatives of leading circles of the executive and experts from Russia, Ukraine, and Kazakhstan were enlisted.

A paper on the position and approaches of Ukraine on these problems was presented at the conference by V.V. Durdynets, first deputy chairman of the Supreme Soviet of Ukraine. We offer this paper in slightly abridged form.

The topicality of the "International Arms Trade in the Transitional Economy" conference is dictated by the actual situation in the world. The conclusion of the Cold War, democratic revolutions in the East European countries, the disintegration of the former Union, the diminution in the threat of the outbreak of a nuclear war, and the easing of international tension are at the same time engendering new problems. One such—the unswerving growth of arms stockpiles—is assuming menacing proportions for the world community.

The reduction in defense spending accompanied by the reduction in the extent of government military purchases is prompting the traditional manufacturers of arms and military equipment to seek possibilities of their sale outside of their own countries. But the supply of arms generally to the antagonists in internal, interstate, and regional conflicts is leading to their intensification and, as a result, is undermining the foundations of international trust and security.

For this reason Ukraine shares the disquiet of the international community concerning the inordinate stockpiling of conventional arms in regions of international instability. Uncontrolled arms exports are, indeed, creating the prerequisites for the emergence of new armed conflicts at both the national and international levels and increasing the threat to international peace and security.

At the same time, on the other hand, it is clear that the measures adopted by the international community in this direction should not impede the realization of the national interests of the sovereign states in the sphere of international economic and military-technical cooperation.

Whence it follows that the above-mentioned problems should be resolved in a complex, comprehensive, well-considered fashion, and with a forecast for the future.

There is no doubt that an exceptionally important role is performed here by economic factors and trends in the defense sector of the economy. And not only these. The particular features of the transitional period in this country or the other should be borne in mind also. Ukraine also has its own specific features on this issue.

Their essence is as follows.

Following Ukraine's acquisition of political independence, its formation as an independent state has entailed the accomplishment of the following tasks:

the building of a democratic state based on the rule of law and its political structures and institutions;

the creation of the foundations of the market economy;

the modernization of the existing military-industrial complex;

the implementation of social stabilization reforms of the transitional period.

Thus the accomplishment of just one of the above tasks is extremely complicated and requires a comprehensive approach.

Ukraine is endeavoring to tackle these tasks consistently and comprehensively on a new and fundamentally balanced basis. First, this means primarily the creation of the necessary legal base and the organization of the structures necessary for the formation and realization of official policy and a mechanism of interaction with the international community.

There are here many difficulties and barriers on this path. But it is obvious also that Ukraine has since the first days of its independence defined as a priority direction of its official policy strict compliance with all international agreements and commitments pertaining to disarmament and the nonproliferation of all weapons of mass destruction without exception.

Second, Ukraine is confirming the peace-loving nature of its foreign policy by consistent practical actions geared to a substantial reduction in the army and conversion of the military-industrial sector of the economy.

In undertaking conversion Ukraine has taken the path of a direct reduction, of 70 percent on average, in the extent of the development and manufacture of arms and military equipment and the diversification and reprofiling of the high research and production potential which has traditionally been concentrated in the military-industrial sector.

In devising the official program of conversion we made an attentive study of the experience of the United States and the West European countries and tried to adapt to our conditions all that is useful which this experience contains. But the point is that no one in the world has yet undertaken conversion of such depth and on such a scale.

It should be considered that conversion in Ukraine is being undertaken against the background of big transformations in the economy connected with the transition from a centralized model of management to market relations. The economy of Ukraine has inherited from inordinate centralization narrowly specialized enterprise giants linked by commercial ties to hundreds and thousands of such enterprises on the scale of the entire Soviet Union.

Third, as a legacy of the past, we have Chernobyl with all its economic, environmental, and social problems.

Fourth, problems of nuclear disarmament and the need to salvage the inordinate conventional weapons and munitions surpluses entail for Ukraine expenditure running to millions of dollars.

And fifth, we must, as a whole, consider problems of Ukraine's military security.

A most important task is actual support for state sovereignty and political independence and preservation of territorial integrity and the inviolability of the borders. Ukraine proceeds from the fact that it is not the potential enemy of a single specific state. At the same time sources of military danger have not disappeared.

For this reason Ukraine believes it essential to have its own armed forces for the assurance of national security and also a national defense industry which caters to the need for arms and military equipment at a level sufficient to deter and ward off military aggression.

All these and many other political and economic factors need to be considered for an understanding of Ukraine's policy and the decisions adopted by its parliament, president, and government.

As far as the immediate problems of the international trade in arms and military equipment are concerned, Ukraine adheres firmly to the position that this delicate matter should be handled only by civilized methods, under strict government control, and with regard for all international agreements and commitments.

The attitude toward this problem is equally balanced and moderate at all levels of both the legislative and executive authorities of Ukraine. We are doing everything to ensure that the external activity of Ukraine, as a young independent state, may nowhere in the world be a cause of political instability and a deterioration in relations with other states.

This applies primarily to the approaches to exports and imports of arms, military equipment, and individual types of raw material, intermediate products, and technology which could be used to create weapons.

A government expert-technical commission was formed in Ukraine in March 1992. It was entrusted with organization of the licensing and quantitative restriction of export-import transactions in arms and military equipment, the elaboration of lists of types of raw material, intermediate products, technology, and equipment which could be used to create arms and military equipment, and the organization of supervision of compliance with the special conditions of exports and imports of these types of products and services.

A national export-control system was created in Ukraine with the participation of this commission and ministries and departments of Ukraine on the basis of an in-depth study of foreign experience.

An Expert-Technical Committee was created under the auspices of the Cabinet of Ministers of Ukraine also. It is entrusted with the functions of working body for the preparation of material on matters concerning the jurisdiction of the government commission.

A separate decree of the Cabinet of Ministers of Ukraine confirmed the list of types of raw material, intermediate products, equipment, and technology which may be used to create weapons and military and specialized equipment which may be exported only in accordance with a special permit. The list was drawn up entirely in accordance with international practice.

The law of Ukraine on foreign economic activity, in particular, specifies that exports and imports of arms, munitions, military equipment and special components for their manufacture, explosives, and nuclear material, technology, equipment, and installations, and also other types of products, technology, and services which may be used for the manufacture of weapons and military equipment, may be realized exclusively by subjects of foreign economic activity authorized by Ukraine at the official level.

The Criminal Code of Ukraine has been supplemented by Article 228-B6, which specifies punishment for a violation of the established export and import procedure involving a loss of liberty of three to eight years with confiscation of assets in full.

The national system of special export control in Ukraine extends to all subjects of economic activity, regardless of forms of ownership.

For the purpose of coordination of action in respect to special export control, Ukraine signed the corresponding agreement with other states of the CIS on 26 June 1992 in Minsk.

In accordance with this agreement, Ukraine undertook to prevent reexports of arms, military equipment, and all other items to which the system of special licensing extends without the written consent of the state in which they were manufactured.

Ukraine also undertook to exchange with other countries information concerning exports, pursue a concerted export-control policy, and apply joint sanctions in respect to exporters that violate the established procedure.

We believe that by its open and consistent peace-loving foreign policy and practical actions pertaining to the creation of the national export-control system and support for international agreements and commitments pertaining to disarmament and the nonproliferation of weapons of mass destruction and their delivery systems Ukraine has given a good account of itself as a responsible and honest partner in the international community.

The national export-control system in Ukraine is realized in the following main directions.

First, control of exports of conventional types of arms and military material. Sharing the concern of the international community at the inordinate and destabilizing stockpiling of conventional arms in particular regions of the world, which is creating a threat to national and regional peace and security, Ukraine is pursuing a

responsible and well-considered policy in the sphere of international arms supplies and preventing supplies of arms to regions of international tension.

If necessary, the Government of Ukraine is prepared to conduct bilateral or multilateral negotiations and consultations with the governments of other states for the purpose of preventing uncontrolled international transfers of conventional arms.

Second, control of exports of dual-purpose goods and technology. When deciding questions connected with exports of nuclear materials and technology Ukraine takes account of the basic provisions of the Nuclear Nonproliferation Treaty, the Convention on the Physical Protection of Nuclear Material, and the corresponding documents of the IAEA, the Nuclear Suppliers Group, and the Zangger Committee.

We will adopt the necessary measures in accordance with the Convention on the Prohibition of Chemical Weapons for the purpose of realization of the plans of the international community aimed at the destruction and total elimination of chemical weapons.

Ukraine is prepared for cooperation with the states which are party to the Nuclear Technology Control Regime (NTCR) on an equal basis and on terms whereby such cooperation does not impede the development of Ukraine's rocket and space program and also for the foreign economic cooperation of Ukrainian enterprises in the sphere of the manufacture and use of rocket systems and technology for peaceful purposes.

The position and approaches of Ukraine are every reason for it to be considered a dependable and honest partner in the international community. But, in turn, we would like not only to be perceived in the world such as we are but also that account be taken of the problems which Ukraine is encountering in adhering to this position.

The first circle of questions here is connected with the conversion of Ukraine's military-industrial complex. This will take time and will affect not only the interests of the state but also the vital requirements of more than 1 million people.

Despite the reduction in its military spending contemplated by Ukraine and its alignment within the next five years at a level relative to the proportion of gross domestic product most typical of the developed countries, despite the reduction in its armed forces, and despite the significant reduction in the extent of the manufacture of arms and military equipment under the conditions of the demolished administrative-command and the fledgling market economy, the military-industrial complex of Ukraine remains a reality which has to be reckoned with.

Ukraine's conversion programs cannot be funded other than to a considerable extent thanks to the sale of weapons on international markets. But it should be said

frankly here that some people overseas view Ukraine's peace-loving policy and its unilateral disarmament steps as our weakness and are endeavoring to impose their "rules of the game," squeezing us out of international markets, and wish to make Ukraine a raw material appendage of highly developed countries. We emphatically cannot agree with such an approach.

Further, the proposals and numerous promises of individual Western states concerning conversion and the transfer of Ukraine's defense industry and mechanical engineering to market relations and privatization with the attraction of technical and financial assistance on the part of Western foundations—the International Monetary Fund, the World Bank, and the European Bank for Reconstruction and Development—remain unrealized as yet. Availing myself of the opportunity, therefore, I would like to emphasize once again that we are interested in a stimulation of the efforts of the world community in investment processes of conversion in Ukraine.

The second circle of questions is connected with the problem of provision of the national army with weapons.

As far as conventional arms such as tanks, armored fighting vehicles, ordnance, aircraft, and helicopters are concerned, these arms gradually become obsolete and will in time create only the illusion of power. And the nuclear weapons which exist on the territory of Ukraine are, as we all know, in accordance with the adopted international agreements, to be eliminated within a particular time frame following ratification of the START I Treaty by the Supreme Soviet.

Conventional arms are manufactured in other countries of the CIS, mainly Russia. Maintaining their combat capability in Ukraine entails the renovation and replacement of components. They will have come to the end of their service life in the next few years. Considerable purchases of components and arms will be necessary to maintain their combat capability.

Thus provision of the national army of Ukraine with arms will depend on external supplies to a considerable extent.

Given the current conditions, this involuntary method of maintaining combat readiness is the sole possible method. At the same time Ukraine, as a sovereign state, will orient itself toward a modernization of the military-industrial complex when it is possible to create a national defense industry which corresponds to Ukraine's economic possibilities and is capable of manufacturing the necessary arms, with the participation of other states, possibly.

At the same time, on the other hand, there is today a reverse side to the said problem also. It is today no secret that Ukraine has surpluses of almost all types of conventional arms, some of which could be supplied for export on the terms generally accepted in world practice.

But about Ukraine's arms exports there is nothing to be said as yet inasmuch as the extent of them is negligible as a result of the existing obstacles to them. For this reason I have to say this. As an independent equal civilized state, Ukraine endeavors to support the activity of the arms nonproliferation regimes already in effect. At the same time, on the other hand, we should have the same rights as other states.

Unfortunately, we see that even today some people want to take advantage of the regime of the nonproliferation of weapons under particular conditions for attempts to secure for the corporations of their states unilateral advantages on the civilian high-technology markets: be it cooperation in the sphere of world nuclear power engineering and civilian chemical industry or the peaceful conquest of space.

On this level it would seem to us that the activity of the Coordinating Committee for Multilateral Export Control (Cocom) is in need of serious adjustment. As we all know, it was formerly created to restrict exports to the former socialist countries. Today there is neither a socialist camp nor the former Union, and there is no reason for a discriminatory form of trade procedures. But the obstacles, for Ukraine included, persist.

No less discriminatory is the regime of control of the nonproliferation of missile technology.

Ukraine is a world rocket power. Its military-industrial complex is the priority manufacturer of the Zenit and Tsiklon carrier rockets, the Energiya rocket module, the SS-18 and SS-24 combat missile systems, and so forth. Ukraine's military-industrial complex undoubtedly has great potential in the sphere of all types and classes of rocket engines, guidance systems, onboard spacecraft support systems, optics, and such.

But, unfortunately, a trend toward increased discrimination in this sphere of activity relative to the former republics of the USSR as a whole has emerged here also.

I would like to explain our position in this connection. Yes, we undoubtedly support restrictions in this sphere, but restrictions which are equal, all-embracing, under the aegis of the United Nations, and really geared to limitation of the manufacture of offensive arms.

I therefore submit for the recommendations of this conference the following proposal: the creation of a well-conceived equal and effective multilateral system based on an international treaty-legal foundation, and its first steps should be restrictions which are formed by UN structures, not individual states.

Speaking separately about the problem of nuclear nonproliferation, we propose concentration even now on the preparation of the 1995 Rome Conference concerning the future of the Nuclear Nonproliferation Treaty and also the nuclear technology of arms in full.

Concluding my speech, I would like to express a few important thoughts from our viewpoint.

First, the world community, the participants in our conference included, have no reason to fear that Ukraine might engage in an unchecked international arms trade in disregard of current rules. I state authoritatively that this will not happen! While possessing significant export potential in the arms sphere, Ukraine will undoubtedly observe the conditions that exist in world practice and will also participate actively in all constructive and equal measures to improve them.

Second, Ukraine, as an independent state, has already been recognized by 135 states. We are grateful for this recognition. But there is another aspect also—the establishment of mutually beneficial partner relations on a qualitatively new basis with all countries without the imposition of the terms of ultimatums and the linkage of the solution of his question or the other with Ukraine's implementation of this step or the other and without a narrowly restricted view of Ukraine through the problem of nuclear disarmament.

Yes, our country is currently going through a difficult transitional period. But Ukraine is a major European state with a wealth of human resources and substantial production, research, and natural potential. We are sure that we will overcome the temporary economic difficulties and will occupy a worthy place in Europe and the world.

It would be good were this to happen with the comprehensive support of the world community.

REGIONAL AFFAIRS

EC-Sponsored Nuclear Fusion Project Announced

BR3006102793 Eschborn NACHRICHTEN FUER
AUSSENHANDEL in German 1 Jun 93 p 1

[Text] The EC Commission has awarded the European industrial group Citif/Italy, Framatome/France, NCC Ltd./Great Britain, and Siemens/Germany the contract for the European industrial contribution to the overall planning of the ITER fusion reactor. ITER (International Thermonuclear Experimental Reactor) is a demonstration plant for the first attempt at controlled nuclear fusion, planned jointly by the United States, Russia, Japan, and the European Community. Energy is to be produced with ITER not by nuclear fission, as in a nuclear power station, but for the first time by nuclear fusion, by fusing two light atomic nuclei to form one heavy atomic nucleus.

AUSTRIA

Officials Seize Radioactive Material**Arrest Three Smugglers**

AU0607130793 Vienna KURIER in German 6 Jul 93 p 17

[Report by W. Theuretsbacher: "'Nuclear Deal' Frustrated at Car Park"]

[Excerpt] Three nuclear smugglers who wanted to go into international business were stopped at the car park outside a supermarket in Schwechat. They were caught with some 1.5 kg of radioactive material by Interior Ministry officials.

For weeks, undercover officers of the EPT [the Anti-Terrorist Task Force] had one Serb and two Viennese of Serbian descent under observation. The trio were looking for clients for what they said was plutonium. On Monday morning [5 July], the material was to be handed over at the car park of the Baumax market in Schwechat. However, the site had already been surrounded by the special police task force, Kobra, and the smugglers were arrested. One iron container with radioactive material was seized. The three men are considered to belong to the Viennese petty crime world. Whether the radioactive material is indeed the highly poisonous plutonium is to be doubted. The iron container was taken to the research center at Seibersdorf to be analyzed. The authorities are still waiting for the result. [passage omitted]

'Nuclear Smugglers' Released

AU0707104393 Vienna KURIER in German 7 Jul 93 p 15

[W. Theuretsbacher report: "Three Nuclear Smugglers Free Again"]

[Excerpt] Nuclear smugglers all over the world might interpret it as an invitation. After a gang of Slovak

smugglers got away with a mild punishment last year, the recently arrested uranium smugglers—three men of Serbian descent—were immediately released after they tried to sell "plutonium" in Vienna.

Having been observed by anti-terrorist specialists of the Interior Ministry, they were detained at a car park outside the Baumax market in Schwechat on Monday [5 July]. The Geiger counter began to rotate when it was held near their luggage. According to the result of the analysis of the radioactive material, it is not plutonium but 1.5 kg of uranium pellets, which are used in nuclear rods. [passage omitted]

FRANCE

Officials To Explain Arms Policy to China

AU0807114493 Paris AFP in English 1104 GMT 8 Jul 93

[Text] Paris, July 7 (AFP)—Two French government representatives are to fly to Beijing this week to explain France's policy on selling arms to Taiwan, according to the weekly defence newsletter TTU.

The newsletter identified them as Jacques Friedmann, a former president of the national carrier Air France, now advisor to Prime Minister Edouard Balladur, and an unnamed member of Defence Minister Francois Leonard's team.

Balladur aides refused to confirm the report, but said the government was keen for relations with China to get back on as normal a footing as possible.

According to TTU, France will inform China that it intends to honour all deals signed with Taiwan, and that 16 frigates sold to Taipei in 1991 would be armed, instead of with simple empty hulls, because of a commitment made by the previous Socialist administration.

France would also ask China to firm up its offers of contracts so that French industrialists would not accept new orders from Taiwan, TTU added.

The frigate deal, worth 4.8 billion dollars, and another contract for Mirage fighter jets worth 3.8 billion dollars, led to a series of protests and economic reprisals against France by China, which considers Taiwan part of its territory and objects to any major arms sales to it.

In Taiwan the United Daily News quoted Taipei's representative in Paris as saying that the new French government would sell no more arms to Taiwan after the Mirages in a bid to normalize relations with Beijing.

"The administration of Prime Minister Edouard Balladur is trying to mend its relations with mainland China, and has thus decided to stop new military supplies for Taiwan at least for the time being," Chiu Mao-Nan was quoted as saying.

Defense Ministry Brochure Discusses Hades Nuclear Weapons System

PM2806084593 Paris LE MONDE in French 24 Jun 93 p12

[Unattributed report: "The Nuclear Missile Arsenal Is Limited to Thirty Hades Missiles"]

[Text] In an official brochure on the state of the French Armed Forces in 1993 which has just been published, the Defense Ministry confirms for the first time that the Hades nuclear weapons system, operated by the ground forces, consists of 15 launchers maintained in a state of technical and operational readiness. In other words, there are 30 missiles in all because each Hades platform, which takes the form of a truck, has been designed to carry—and potentially launch—a pair of missiles. A previous edition of this same brochure merely indicated that the Hades weapons system was constituted in a regiment but gave no further details.

Originally planned to be based on 120 missiles mounted on 60 platforms, the Hades program was suspended in midstream in summer 1991 on the order of Francois Mitterrand, who the next year announced the "immediate and definitive cessation" of the program to the surprise of the General Staff and the manufacturers concerned. The Hades missile is supposed to carry a nuclear charge of variable yield (a maximum of 80 kilotonnes) according to the projected military effect on the ground over a range of less than 500 km.

Some press leaks, neither confirmed nor denied officially at the time, mentioned that the Hades fleet had been limited ultimately to around 30 missiles. This is thus the first document since then to be produced by the Defense Ministry detailing the ultimate deterrent force—by comparison with the strategic arsenal composed of submarines, Mirage IV bombers, and missiles buried in silos in Haute Provence—which cites the number of launchers. The same brochure adds that the Hades force can "increase in power within a period commensurate with the development of the international situation."

The regiment, with its 30 missiles stockpiled in depots, is garrisoned at the Suippes camp (Marne Department) and has its own independent means of communications with Luneville (Meurthe and Moselle Department). The Air Force retains the nuclear warheads at sites already equipped to house its own warheads.

On the subject of the ultimate deterrent, the document also spells out that the Air Force is in the process of adapting 45 Mirage 2000N, each one fitted with the medium-range air-to-ground missile. Once released by its delivery vehicle, the missile can carry a 300 kilotonne nuclear charge over a distance of 100 to 300 km depending on the altitude of release.

In past years France had up to 75 Mirage III and Jaguar planes capable of launching the AN52 nuclear weapon. These weapons, due to have been withdrawn from service in 1997, actually began to be withdrawn in 1991.

After withdrawal they were dismantled. They have thus not been replaced in equal number by more modern arms systems as part of a voluntary policy of nuclear disarmament—and a unilateral one, since France has not signed any international accord on this issue.

Finally, the Defense Ministry brochure says with regard to the strategic force that the fleet of Mirage IV P nuclear bombers now stands at 15 planes. Previously it was 18. In principle the Mirage IV P, armed with medium-range air-to-ground missiles, would remain in operational service until 1996. It is planned that its duties will be transferred to the Rafale at the end of this century.

Dismantling of Obsolete Nuclear Weapons Temporarily Stopped

AU0807113593 Paris AFP in English 1106 GMT 8 Jul 93

[Text] Paris, July 8 (AFP)—France has temporarily stopped dismantling obsolete nuclear weapons as a cost-cutting measure, the weekly magazine Air and Cosmos Aviation International reports in its latest issue.

It said AN 52 nuclear bombs from Mirage IV, Jaguar and Mirage III fighters were again being stockpiled in specialised arms depots.

France had in recent years speeded up the withdrawal of its obsolete nuclear weapons. It was decided to take out of service all the AN 52 "final warning" bombs by 1991, instead of 1997 as originally scheduled, according to a defence ministry document published last March.

All the Pluton short-range surface-to-surface nuclear missiles, taken out of service last year instead of 1994, will also eventually be dismantled, the document said.

Moratorium on Nuclear Testing Extended

LD0407093393 Paris France-Inter Radio Network in French 0900 GMT 4 Jul 93

[Text] France will continue its moratorium on nuclear testing. A communique to this effect was released by the Elysee Palace this morning. It says that France confirms that it favors a treaty setting a complete ban on testing, on condition that it be universal and monitorable. France also says that it is in favor of an unlimited extension in 1995 of the nonproliferation treaty of which it is a signatory.

SWITZERLAND

Official Denies Report on Nuclear Materials to Iran

LD2606110893 Bern Swiss Radio International in English 1000 GMT 26 Jun 93

[Text] Switzerland has denied allegations in an Israeli newspaper that Swiss companies are major suppliers to Iran's nuclear program. An Economics Ministry official said Switzerland had placed controls on a list of products which could have a second use in the nuclear industry.

He added he was sure there had been no large delivery of materials from Switzerland to Iran which could be used in making weapons of mass destruction.

The Israeli Foreign Minister, Shimon Peres, said he had no knowledge of an arms trade between Switzerland and Iran.

The allegations came as the Swiss state secretary in the Economics Ministry, Franz Blankart, was due to visit Iran.

TURKEY

Foreign Ministry Welcomes U.S. Decision on Nuclear Tests

TA0707102793 Ankara TRT Television Network
in Turkish 1000 GMT 7 Jul 93

[Text] Turkey has welcomed the U.S. announcement that it will postpone its nuclear tests for at least another 15 months and has expressed the hope that this decision will serve as an example to other countries as well.

A Foreign Ministry statement on the subject expresses the hope that the decision will constitute a significant step toward an international arrangement whereby nuclear tests will be banned altogether as of 1996. The statement notes that Turkey has always exerted utmost efforts to prevent nuclear proliferation and to stop nuclear tests on a global level, and it will continue to do so in the future as well.

UNITED KINGDOM

Defense Secretary Concerned Over Extended U.S. Nuclear Test Ban

LD0307190993 London PRESS ASSOCIATION
in English 1855 GMT 3 Jul 93

[By Chris Moncrieff, PRESS ASSOCIATION political editor]

[Text] President Clinton's announcement today extending the moratorium on U.S. underground nuclear testing put Britain in an uncomfortable position.

The government's immediate reaction was that although it understood his move, ministers did not believe limited further testing would prejudice progress towards a satisfactory comprehensive test ban. Defence Secretary Malcolm Rifkind made no secret of his unease about the President's decision.

"What we are really concerned about as technology develops is that it is always sensible so long as nuclear weapons exist, that they have the highest possible level of safety and reliability," he said on BBC TV News. "One way of helping achieve that is testing. There may be other ways we can achieve the same results."

Labour and the Liberal Democrats welcomed Mr. Clinton's announcement. The Ministry of Defence was at pains to point out the Trident nuclear submarine programme would not be affected. Whitehall officials claim the safety of the new Trident warhead was proved during previous tests in the Nevada Desert.

The moratorium, which depends on other countries stopping underground testing, is due to last at least until September next year. Mr. Clinton said in his weekly radio address to the nation that if any tests were conducted by the other nuclear powers—Britain, France, China and Russia—then he would direct the Department of Energy to prepare to conduct additional tests.

In London, the government said: "We understand the reasons for President Clinton's decision. The question of the use of the Nevada test site is ultimately for the U.S. to determine. The UK will act in accordance with that decision. There are no plans to test elsewhere. Our policy on testing has to reconcile two important but potentially conflicting objectives. One is to ensure we have the means to maintain the highest standards of nuclear safety assurance in the long term. We have plans for three further tests with this aim, and with their potential contribution to our readiness for an eventual comprehensive test ban very much in mind. But our second objective, to promote non-proliferation efforts, could on the right terms be served by a test ban. We fully support the importance ascribed to these objectives by the U.S. but continue to believe that some limited further testing need not prejudice progress towards a satisfactory comprehensive test ban. We look forward to further consultations with the U.S. and other nuclear powers on how we can ensure we meet both objectives satisfactorily. We will need to see whether others resume testing and consider the implications if they do."

Labour hailed Mr. Clinton's announcement as "wonderful news". Shadow defence secretary Dr David Clark said: "We very much welcome this because there is no need for any further nuclear testing. This can be done by laser laboratories and computer methods."

Liberal Democrat defence spokesman Menzies Campbell said the President's commonsense had "prevailed over Tory short-sightedness". He added: "The only reason the Conservative Government wished additional tests is for the development of a new, but entirely unnecessary, sub-strategic weapon system."

The Campaign for Nuclear Disarmament heralded the U.S. move as a "victory for grassroots peace campaigners around the world".

CND chairperson Majorie Thompson said: "Those people who would prefer a nuclear-free world to a nuclear free-for-all will be delighted by the U.S. initiative. We urge the UK government to give its full support to President Clinton's plans."

END OF

FICHE

DATE FILMED

22 July 1993